

PHCC Academy™

Plumbing 301 Syllabus

Course Contact for Registration and Non-LMS Questions

State Chapter Partner

Refer to <http://foundation.phccweb.org> and search for PHCC Academy page for listing

Course Contact for Technical Problems in Absorb LMS

PHCC Academy™ Staff

academy@naphcc.org

Prerequisites

Plumbing 101 and 201 or equivalent

Welcome to the PHCC Academy™ Online Apprenticeship-Related Instruction Program!

This program is designed to provide students who cannot attend classes in a traditional apprentice program with the same opportunity to learn the textbook fundamentals of the trade. This training course must be supplemented by your employer, through both technical assistance and on-the-job training in each area of instruction in the book.

Course Goals

- To familiarize students with fixtures and appliances
- To familiarize students installation methods for fixtures and appliances
- To provide students with an understanding of blueprints, drawing types, and plumbing plans
- To introduce students to fuel gas piping systems and appliances
- To introduce students to advanced mathematical concepts used in plumbing work
- To provide students with an understanding of electrical concepts related to plumbing work

Student Responsibilities

- Complete work in a timely manner.
- Read all information and assignments within the learning management system before starting the course.
- Complete all tests in this course as closed-book. Students are on the honor system.
- Complete all assignments with a passing grade of 70 percent or higher.
- Complete the course in 1 year (12 months) or request a 6-month extension before the course expiration date.
- Maintain records of on-the-job training completed.

Employer Responsibilities

- Ensure that all students enrolled are proficient in reading and writing in English at a high school level and possess the self-motivation to complete internet-based coursework.
- Register apprentices with the U.S. Department of Labor, either through your own apprenticeship program or through your PHCC State Chapter Partner's registered apprenticeship program.

- Track the apprentice's on-the-job training hours and document such hours. Documentation records must be maintained by the employer for the duration of the apprentice's employment and must be retained as required by the U.S. Department of Labor.
- Ensure that apprentices are paid a progressively increasing schedule of wages and fringe benefits based on a percentage of the current journey worker wage rate as specified in the Standards of Apprenticeship for the program under which the apprentice is participating.

State Chapter Partner Responsibilities

- Register and enroll students in the appropriate courses on the learning management system.
- Assist students with ordering textbooks for their courses.
- Act as the primary point of contact for students and employers who register for courses in their state.
- Serve as the liaison between the PHCC Academy and employers of apprentices enrolled in the program in their state.

PHCC Academy Responsibilities

- Ensure that the federal Department of Labor approval for the apprenticeship program is kept current and is updated as needed.
- Administer the learning management system and course offerings for the eLearning program. This includes developing course content and placing it into the learning management system.
- Provide students with learning management system usernames and passwords.
- Provide all administrative functions on the learning management system.
- Coordinate any Advanced Placement Testing with PHCC State Chapter Partners.
- Provide a completion letter and certificate to students upon successful completion of each course.

Required Textbook (Purchased Separately)

PHCC Educational Foundation Plumbing Apprentice & Journeyman Training Committee (2017). *Plumbing 301*, 2nd ed. Clifton Park, NY: Delmar, Cengage Learning.

Assignments

Unit 1 – Installation Practices

Read Chapter 1 in the Plumbing 301 textbook.

Video – The Life of Pipe: Planning, Prefabrication, Installation and Delivery

Chapter 1 Review PowerPoint

Read Chapter 2 in the Plumbing 301 textbook

Chapter 2 Review PowerPoint

Read Chapter 3 in the Plumbing 301 textbook.

Video – How to Install a New Garbage Disposer

Chapter 3 Review PowerPoint

Read Chapter 4 in the Plumbing 301 textbook.

Chapter 4 Review PowerPoint

Read Chapter 5 in the Plumbing 301 textbook.

Chapter 5 Review PowerPoint

Read Chapter 6 in the Plumbing 301 textbook.

Chapter 6 Review PowerPoint

Unit 1 Exam

Unit 2 – Blueprint Reading

Read Chapter 7 in the Plumbing 301 textbook.

Chapter 7 Review PowerPoint

Read Chapter 8 in the Plumbing 301 textbook.

Video – How to Read Floor Plans

Chapter 8 Review PowerPoint

Read Chapter 9 in the Plumbing 301 textbook.

Chapter 9 Review PowerPoint

Quiz – Drawing Assignment

Unit 2 Exam

Unit 3 – National Fuel Gas Code, Piping, Connections, and Controls

Read Chapter 10 in the Plumbing 301 textbook.

Read Chapter 11 in the Plumbing 301 textbook.

Read Chapter 12 in the Plumbing 301 textbook.

Chapter 10 Review PowerPoint

Chapter 11 Review PowerPoint

Chapter 12 Review PowerPoint

Unit 3 Exam

Unit 4 – Combustion Air, Venting, and Fundamentals of LP

Read Chapter 13 in the Plumbing 301 textbook.

Chapter 13 Review PowerPoint

Read Chapter 14 in the Plumbing 301 textbook.

Video – Fuel Gas Purging

Chapter 14 Review PowerPoint

Venting and Fuel Gas Terms Review Game

Unit 4 Exam

Unit 5 – Elevations, Grade, and Trench Safety

Read Chapter 15 in the Plumbing 301 textbook.

Chapter 15 Review PowerPoint

Read Chapter 16 in the Plumbing 301 textbook.

Video – How to Set Up a Builder's Level

Chapter 16 Review PowerPoint

Unit 5 Exam

Unit 6 – Applied Math – Offsets, Ratios, and Tank Capacities

Read Chapter 17 in the Plumbing 301 textbook.

Video – Parallel Offsets

Video - 45° Parallel Offsets with Constants

Video – Rolling Offsets

Chapter 17 Review PowerPoint

Quiz – Offsets and Ratios

Read Chapter 18 in the Plumbing 301 textbook.

Chapter 18 Review PowerPoint

Video – Calculating Tank Volume

Quiz – Tank Capacities, Volume, and Weight of Water
Unit 6 Exam

Unit 7 – Installation Practices

Read Chapter 19 in the Plumbing 301 textbook.
Chapter 19 Review PowerPoint
Read Chapter 20 in the Plumbing 301 textbook.
Chapter 20 Review PowerPoint
Read Chapter 21 in the Plumbing 301 textbook.
Chapter 21 Review PowerPoint
Read Chapter 24 in the Plumbing 301 textbook.
Chapter 24 Review PowerPoint
Unit 7 Exam

Unit 8 – Related Science

Read Chapter 22 in the Plumbing 301 textbook.
Video – Psychrometric Charts
Video – Calculating Relative Humidity and Dew Point
Chapter 22 Review PowerPoint
Read Chapter 23 in the Plumbing 301 textbook.
Chapter 23 Review PowerPoint
Related Science and Water Treatment Terms Review Game
Unit 8 Exam

Unit 9 – Blueprint Reading and Construction Drawings

Read Chapter 25 in the Plumbing 301 textbook.
Chapter 25 Review PowerPoint
Read Chapter 26 in the Plumbing 301 textbook.
Video – Electrical Safety
Chapter 26 Review PowerPoint
Read Chapter 27 in the Plumbing 301 textbook.
Video – Basic Electrical Measurements
Video – Electrical Troubleshooting
Chapter 27 Review PowerPoint
Unit 9 Exam

Final Exam

Course Evaluation