

# PHCC Academy™

## Plumbing 201 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 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 water distribution systems
- To familiarize students with sizing of water distribution and DWV systems
- To provide students with an understanding of mathematical concepts necessary for plumbing work
- To provide students with an understanding of interpreting trade drawings and sketches
- To introduce students to venting systems
- To introduce students to safety concepts for typical 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 Textbooks (Purchased Separately)**

PHCC Educational Foundation Plumbing Apprentice & Journeyman Training Committee (2015). *Plumbing 201*, 6th ed. Clifton Park, NY: Delmar, Cengage Learning.

### **Assignments**

#### Unit 1 – Installation Practices

Read Chapter 1 in the Plumbing 201 textbook.

Video – Customer Service Leadership

Video – Customer Service Persuasion

Chapter 1 Review PowerPoint

Read Chapter 2 in the Plumbing 201 textbook

Video – Solvent Cement Joining PVC

Video – Flaring Copper Tube

Video – Cutting Cast Iron Soil Pipe with Snap Cutters

Video – Joining PEX Pipe

Video – Using SharkBite Push Fittings

Chapter 2 Review PowerPoint

Read Chapter 3 in the Plumbing 201 textbook.

Chapter 3 Review PowerPoint

Video – Radiant Floor Heating Types

Unit 1 Exam

## Unit 2 – Joining Methods

Read Chapter 4 in the Plumbing 201 textbook.

Video – Welding PPE

Chapter 4 Review PowerPoint

Read Chapter 5 in the Plumbing 201 textbook.

Video – Soldering Copper Tube

Video – Brazing Copper Tube

Chapter 5 Review PowerPoint

Unit 2 Exam

## Unit 3 – Installation Practices – Water Supply

Read Chapter 6 in the Plumbing 201 textbook.

Video – Public Water Distribution System

Video – Private Water Distribution System

Chapter 6 Review PowerPoint

Read Chapter 7 in the Plumbing 201 textbook.

Chapter 7 Review PowerPoint

Read Chapter 8 in the Plumbing 201 textbook.

Video – Gas Water Heater Troubleshooting

Chapter 8 Review PowerPoint

Unit 3 Exam

## Unit 4 – Installation Practices - DWV

Read Chapter 9 in the Plumbing 201 textbook.

Video – Backflow and Cross Connection Control: Applications and Installations

Chapter 9 Review PowerPoint

Read Chapter 10 in the Plumbing 201 textbook.

Chapter 10 Review PowerPoint

Read Chapter 11 in the Plumbing 201 textbook.

Chapter 11 Review PowerPoint

Read Chapter 12 in the Plumbing 201 textbook.

Video – Hydraulic Jump

Chapter 12 Review PowerPoint

Video – Wastewater Treatment Plant

Read Chapter 13 in the Plumbing 201 textbook.

Chapter 13 Review PowerPoint

DWV Systems Game

Unit 4 Exam

## Unit 5 – Plumbing Mathematics

Read Chapter 14 in the Plumbing 201 textbook.

Video – Adding and Subtracting Fractions Review

Video – Multiplying Fractions Review

Video – Dividing Fractions Review

Video – Mixed Numbers Review

Video – Converting Fractions to Decimals

Video – Exponents and Roots

Chapter 14 Review PowerPoint  
Read Chapter 15 in the Plumbing 201 textbook.  
Chapter 15 Review PowerPoint  
Video – Circles: Circumference and Area  
Video – Perimeter  
Video – Area  
Video – Volume  
Unit 5 Exam  
Quiz – Fractions and Exponents/Roots Quiz

Unit 6 – Related Science and Venting  
Read Chapter 16 in the Plumbing 201 textbook.  
Chapter 16 Review PowerPoint  
Read Chapter 17 in the Plumbing 201 textbooks.  
Chapter 17 Review PowerPoint  
Video – Plumbing Vent System Walk-Thru  
Unit 6 Exam

Unit 7 – Installation Practices  
Read Chapter 18 in the Plumbing 201 textbook.  
Video – How It's Made Sewage Pumps  
Chapter 18 Review PowerPoint  
Read Chapter 19 in the Plumbing 201 textbook.  
Video – How a Plumbing Trap Can Lose Water  
Chapter 19 Review PowerPoint  
Read Chapter 20 in the Plumbing 201 textbook.  
Chapter 20 Review PowerPoint  
Unit 7 Exam

Unit 8 – Safety Practices  
Read Chapter 21 in the Plumbing 201 textbook.  
Chapter 21 Review PowerPoint  
Read Chapter 22 in the Plumbing 201 textbook.  
Chapter 22 Review PowerPoint  
Video – Ladder Safety  
Safety Review Game  
Unit 8 Exam

Unit 9 – Blueprint Reading and Construction Drawings  
Read Chapter 23 in the Plumbing 201 textbook.  
Chapter 23 Review PowerPoint  
Read Chapter 24 in the Plumbing 201 textbook.  
Chapter 24 Review PowerPoint  
Unit 9 Exam

Final Exam

Course Evaluation