CENTER for APPRENTICESHIP & ADULT TRAINING
520 Butler Farm Rd, Hampton VA 23666
757-766-1101
www.nhrec.org/cfaat

Course Name: Plumbing Level IV (NCCER)

Contact Hours: 144

Number of Sessions: 48

Number of Hrs./Session: 3

Mode of Instruction: Classroom

Course Description:
Course is designed based on the NCCER curriculum. Students must take all four levels of plumbing in order to receive a diploma/certificate from New Horizons.

Text: Plumbing Level 4 Trainee Guide 5th Edition, ISBN: 9780138214722

Course Outline and Modules:

1. Business Principles for Plumbers (15 Hours) (Module ID 02401-06) Introduces concepts and practices that are essential for competitive, successful plumbing businesses. Covers basic business accounting and project estimating, as well as techniques for cost control and task organization.
2. Introductory Skills for the Crew Leader (16 Hours) (Module ID 02402-06) Introduces trainees to the knowledge and skills required for team leadership. Covers practical information about today's construction industry; basic leadership skills; safety responsibilities of a supervisor; and a detailed survey of project control techniques.
3. Water Pressure Booster and Recirculation Systems (17.5 Hours) (Module ID 02403-06) Builds on trainees' previous experience with pumps, storage tanks, controls, and pipes and fittings by explaining how to assemble those components into systems that boost water pressure and provide hot water.
4. Indirect and Special Waste (12.5 Hours) (Module ID 02404-06) Explains the code requirements and installation procedures for systems that protect against contamination from indirect and special wastes.
5. Hydronic and Solar Heating Systems (15 Hours) (Module ID 02405-06) Introduces basic hydronic and solar heating systems and their components. Reviews hydronic and solar heating system layout and installation. Also discusses methods inhibiting corrosion in solar heating systems.
6. Codes (7.5 Hours) (Module ID 02406-06) Discusses the different codes used by plumbers across the country and explains how those codes are written, adopted, modified, and implemented.
7. Servicing Piping Systems, Fixtures, and Appliances (22.5 Hours) (Module ID 02407-06) Explains how to diagnose and repair water supply and drainage piping, water heaters, and other appliances and fixtures. Describes the effects of corrosion, freezing, and hard water on plumbing systems.

8. Private Water Supply Well Systems (10 Hours) (Module ID 02408-06) Explains the operation of pumps and well components. Reviews the qualities of good wells and how to assemble and disassemble pumps and components.
9. Private Waste Disposal Systems (10 Hours) (Module ID 02409-06) Describes the types of private sewage systems, discusses the maintenance and replacement of these systems, and explains how to determine the local code requirements for these systems. Covers percolation tests and sewage system planning and layout.
10. Swimming Pools and Hot Tubs (10 Hours) (Module ID 02410-06) Introduces plumbing systems in swimming pools, hot tubs, and spas. Trainees will learn how to install and troubleshoot water supply systems and drains.
11. Plumbing for Mobile Homes and Travel Trailers (10 Hours) (Module ID 02411-06) Describes the location and layout of plumbing systems for mobile home and travel trailer parks. Explains how to design and lay out a system, how to connect water and sewer lines to a mobile home, and how to estimate materials and costs for the park.