

NEW HORIZONS CAREER AND TECHNICAL EDUCATION CENTER  
School Year 2022 - 2023  
HVAC Class Syllabus - CTE Center –Woodside Lane Campus  
Instructor: Lester DeBerry  
Email: [lester.deberry@nhrec.org](mailto:lester.deberry@nhrec.org)  
Phone: 757 874-4444 Ext 5543 Or Front Office Ext 5509

Books: NCCER Pearson

HEATING, VENTILATING, AND AIR CONDITIONING Level One 4th Ed.

**OBJECTIVES:**

- I. OSHA Safety Requirements
- II. EPA 608 Certification (Type I, Type II, Type III, Universal and 410 A)
- III. HEAT Assessment ESCO and VA CTE VERSO Requirements
- IV. Electrical Theory (Ampage, Resistance, Ohm Law, Circuit Parallel and Series, Line Voltage And Control Voltage, Single And Three Phase, And Others)
- V. Mechanical Theory- Basic Refrigerant Cycle (Components Operations, Terminology, Superheat, Sub Cool, States Of Matter; Liquid To Gas Vapor And Others)
- VI. Piping (Gas Line Black Iron, Soft Soldering, Silver Soldering, Flaring And Swaging Copper Pipe, Flex Pipe And Others)
- VII. Principles Of Air Flow And Associated Components Involved With Distribution. (Math Concepts And Formulas)
- VIII. Basic Hand Tools And Math (Electrical, Pipe Fitting, Mechanical And Others)

**Late Work**

Students will be allowed to make up any missed assignments, quizzes, tests and /or training. This must be done within one week after the missed assignment.

**Grading**

Students grade will be formatted as such 34% Employability, 33% Related Instruction, and 33% Competencies. The grading scale is A 90-100; B 80-89; C 70-69; D 60-69.

Modules for Level I NCCER Certification

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- M1: Introduction to HVAC (03101)
- M2: Trade Mathematics (03102)
- M3: Basic Electricity (03106)
- M4: Introduction to Heating (03108)
- M5: Introduction to Cooling (03107)
- M6: Air Distribution Systems (03109)
- M7: Basic Copper and Plastic Piping Practices (03103)
- M8: Soldering and Brazing (03104)
- M9: Basic Carbon Steel Piping Practices (03105)