**Course Outline:**

Explain job opportunities related to the HVACR program.

-Personal evaluations

-Job Applications and resume’

Demonstrate safety rules, regulations, and procedures when working with electrical systems.

-Job Site Safety

-Safety Test -100%

Demonstrate use of hand tools and power tools related to HVACR systems.

-Hand tools and application

-Electrical tools and use

-Hand tool activities and test

Use various meters to measure electrical values.

-Digital and Analog Multi-meter use and practice

**Introduction to Control Circuit Troubleshooting 8.i**

Demonstrate troubleshooting techniques to solve electrical problems encountered in HVACR

electrical systems.

-Troubleshoot units and explanation of system operation.

Demonstrate procedures used for replacing electrical components in an HCACR system.

-Component change-out and replacing of defective parts.

Interpret schematic wiring diagrams for HVACR systems and system components.

-Comprehension of wiring and voltage.

**Alternating Current 6.i**

Define what Electricity is, does, and how it affects HVACR systems.

-What is Electricity; concepts and theory

Demonstrate the use of Ohm’s law and Joule’s law.

-Theory and how Ohm’s law is used to calculate electrical circuits.

Demonstrate techniques involve with assembly and disassembly of a single phase motor.

-Break down and motor component identification.

Determine resistance of windings in a split-phase motor to identify start-run windings.

-Identification and determination of windings in various types of motors.

Determine common start-run terminals of a single phase compressor motor.

-Disassembly of compressor and location of motor windings.

Demonstrate preventive maintenance procedures for a window air-conditioner.

-Proper maintenance and cleaning of coils and motor lubrication.

Demonstrate the procedure of replacing a double-shaft fan motor.

-Breakdown and reassembly of various motor housings and unit assemblies.