**Course Outline:**

Explain job opportunities related to the HVACR program.

-Personal evaluation paper

-Career options and pathways

-Job Applications, resume’, process essay & speech

-Skills/USA opportunities

**Introduction to HVAC 1.i**

-Basic principles of heating, ventilating, and air-conditioning; career opportunities.

-Safety Test – 100% on file.

**Trade Mathematics 2.i**

Demonstrate pressure temperature conversion procedures.

-Pressure and Temperature conversions

**Introduction to Cooling 8.i**

Draw a basic refrigeration system, including refrigerant flow, components, and lines.

Describe the operation of basic components of a refrigeration system.

-Identifying operation of refrigeration accessories

-Pressure and Thermodynamics

-Shop pressure reading and calculations

**Copper and Plastic Piping Practices 3.i**

-Selection, preparation, joining and support of copper & plastic piping and fittings.

-Hand tools and application

-Hand tool activities and test

**Introduction to Cooling 7.i**

Draw a basic refrigeration system, including refrigerant flow, components, and lines.

Describe the operation of basic components of a refrigeration system.

-Identifying operation of refrigeration accessories

-Pressure and Thermodynamics

-Shop pressure reading and calculations

**Soldering and Brazing 5.i**

-Oxygen/acetylene setup/safety

-Think Sign Project

-Installing and removing Think Project Evaporator and copper fitting components.

-Manifold Gauge usage on compression systems

Demonstrate industry-recognized evacuation procedures for a refrigeration system.

Demonstrate the process of charging a refrigeration system.

-Use of recovery unit on compression systems and charging.

-Weigh in, superheat, and sub-cooling procedures performed.

-EPA 608 refrigerant usage credential

-Use of leak detector and oxyacetylene kit repair.

Demonstrate the removal and replacement of a major refrigeration component.

-Other System Controls

-Use of brazing techniques to remove and install compressor, metering device, condenser, &

evaporator. Correct procedures of evacuation. CLEAN, DRY, and TIGHT!