**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!