Heating, Ventilation, Air Conditioning, and Refrigeration

The heating, ventilation, air conditioning, and refrigeration program prepares students for a career in the technical service of residential or light commercial/industrial environmental systems. The student will study the mechanical and electrical/electronic systems involved in contemporary environmental controls. Students in the HVAC program learn to maintain, diagnose, and correct problems throughout all parts of the system.

Program Learning Outcomes (PLO)

After completing the Level 1 Certificate in HVAC and Refrigeration, students will be able to:

PLO 1: Demonstrate proper use of tools specific to the HVACR industry, appropriate use of PPE, and rectify hazardous working conditions.

PLO 2: Calculate the relationship between voltage, current, and resistance using Ohm's Law.

PLO 3: Demonstrate proper cutting, deburring, debriding, and brazing of copper joints, utilizing capillary attraction to produce a secure connection that does not leak.

PLO 4: Pass all four sections of the EPA 608 examination.

PLO 5: Diagnose high and low voltage control problems and faults in typical gas and electric HVACR equipment.

Courses Measuring the Achievement of Program Learning Outcomes

Course	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
HART 1407	X				
HART 1401		X			
HART 1441			X		
HART 1256				X	
HART 2336					X

HVAC RECOMMENDED ACADEMIC PLAN

1ST YEAR, 1ST SEMESTER			Credit Hours	✓
HART	1401	Basic Electricity for HVAC	4	☐
HART	1407	Refrigeration Principles	4	☐
HART	1341	Residential AC	3	☐
HART	1345	Gas/Electric Heat	3	☐
HART	2336	Troubleshooting	3	☐
✹ ***Earned:***		***Level 1 Certificate: HVAC - Residential***	**17**	
1ST YEAR, 2ND SEMESTER				
HART	1256	EPA Recovery Certification Preparation	2	☐
HART	2334	Advanced Air Conditioning Controls	3	☐
HART	2441	Commercial Air Conditioning	4	☐
HART	2442	Commercial Refrigeration	4	☐
HART	2349	Heat Pumps	3	
			16	
✹ ***Earned:***		***Level 1 Certificate: HVAC and Refrigeration: Commercial***	**Total Hours**	**33**