M2023-2024 **HVACR I & II** **Sam Lassiter**

DATES	DESCRIPTION	DAILY OBJECTIVES
8/14-21	Utilize icebreakers to get to know the students Utilize a handbook so that students are aware of rules and expectations.	Introductions Review class/lab rules Review disaster plan and egress routes
8/21-25	Have students browse the internet and report findings on career interests.	Discuss career path options and what is required to be a successful HVACR technician. Create resumes.
8/28-9/1	Discuss the importance of safety by sharing videos with students. Discuss and display various tools used to perform HVAC. Learn to read a tape measure.	Safety protocol and how to properly use PPE Hand tool Identification
9/4-9/8	No school Learn how to convert various measurements (area, temperature, pressure, and weight) for career performance.	9/4 - Labor Day (No School) Understanding and demonstrating trade math.
9/11-9/15	Display and describe various types of HVAC equipment and how they operate.	Introduction to HVACR equipment. Explain basic principles of heating, ventilation, air conditioning, and refrigeration. Identify electrical components of HVACR systems and describe how they operate. Outline sequence of operation.
9/18-9/22	Explain various laws of electricity and how to calculate the measurements obtained with proper tools.	Describe fundamentals of electricity and electrical theory Identify and describe tools used to safely measure voltage, current, and resistance. Build and test various electrical circuits.
9/25-9/29	Create an understanding of the heat transfer process and	Explain fundamentals of heating, as well as the various types of equipment that

	demonstrate the differences between heating equipment.	are utilized.
10/2-10/6	Explain heat transfer, develop an understanding of pressure and temperature relationships, learn how to identify system components.	Outline fundamental concepts of refrigeration cycle, different types of refrigerant, identify major components and controls of an air conditioning system.
10/9-10/13	Explain the relationship between pressure, velocity, and volume in ductwork.	Develop an understanding on how air distribution systems work.
10/16-10/20	Describe various types of motors, applications, and tools that are used for measuring air flow in ductwork.	Identify equipment and materials used to build an air distribution system. 10/20 - PD Day (No Students)
10/23-10/27	Learn how to measure, bend, and connect different types of tubing mechanically with various connection types.	Basic copper and plastic tubing practices
10/30-11/3	Explain the concept of A/C power frequency and how A/C power is generated.	Understanding alternating current. Define transformers (types and how they work).
11/6-11/10	Identify basic electrical safety. Identify what instruments to use and how to safely use them.	Explain how to safely test A/C powered devices. Explain different types of A/C motors
11/13-11/17	Identify different types of compressors and their operation.	Understand and describe compressors in air conditioning.

11/20-11/24		**Thanksgiving Break**
11/27-12/1	We will learn how to define refrigerants, identify desirable characteristics, and identify the various applications that require specific refrigerant characteristics.	Identify various refrigerant classifications and describe their environmental impact.
12/4-12/8	We will learn how to utilize a pressure-temperature chart, so that we have an understanding on how to calculate superheat and subcooling.	Explain how to use pressure-temperature (P-T) charts to calculate superheat and subcooling.
12/11-12/15	We will learn the issues related to oil movement through the refrigerant circuit, the various types and sources of oil contamination, and common practices associated with handling, charging, and removing oils.	Describe the important issues related to the function of lubricating oils in the refrigerant circuit.
12/18-1/1/24		**Winter Break**
1/2-1/5	Demonstrate various leak detection methods and tools, also how to correctly make repairs to equipment that have active leaks	1/2 - PD Day (No Students) Leak detection & coil repair
1/8-1/12	Explain in detail the difference between the 3 R's that are outlined by the EPA in the 608 examination material.	Recovery, reclaim, recycle (EPA 608)

1/15-1/19	No school Display various metering devices, explain the operation, and how to determine if they are operating correctly	1/15 - MLK Day (No School) Functions of a metering device
1/22-1/26	Detail the differences in heat pumps versus conventional heating, as well as how they operate	Intro to heat pumps
1/29-2/2	Explain gas heating operation and identify various types of gas furnaces.	Intro to gas heating
2/5-2/9	Demonstrate how to perform preventative maintenance on a split A/C system as well as a heat pump system with electric heating.	Preventative maintenance procedures
2/12-2/16	Introduce recovery equipment and demonstrate how to use the equipment to remain compliant with EPA 608 regulations.	Refrigerant recovery techniques
2/19-2/23	No school Introduce evacuation equipment and demonstrate how to use the equipment to remain compliant with the EPA 608 regulations.	2/19 - Presidents' Day (No School) System evacuation
2/26-3/4	Detail the reasoning behind the Clean Air Act and why HVAC technicians are required to maintain and follow rules and procedures that are set in place by the EPA	Clean Air Act (EPA 608)
3/11-3/15	Explain the EPA guideline on various equipment classifications	Small Appliance Certifications (EPA 608)

3/18-3/22		**Spring Break**
3/25-3/29	Give overview of technician requirements that is outlined in the 608 reference manual	Technician requirements (EPA 608)
4/1-4/5	Proctor exams for students to receive certifications that we have been preparing for all year.	EPA 608 certifications.
4/8-4/12	Explain and demonstrate how to read and understand an HVAC wiring schematic.	Wiring schematics
4/15-4/19	Create an understanding of different control devices and how to install and troubleshoot them.	4/15 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR 4/16 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR 4/17 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR Introduction to HVAC controls
4/22-4/26	Have students design a wiring project to align with what has been taught throughout the year.	Wiring simulation project.
4/29-5/3	Have students build and wire the simulation project.	Wiring simulation project.
5/6-5/10	Demonstrate skills obtained throughout the year on how to properly follow manufacturer guidelines on installation of a system.	Install and commission a split A/C system with a gas furnace.

5/13-5/17	Demonstrate skills obtained throughout the year on how to properly follow manufacturer guidelines on installation of a system.	Install and commission a split A/C system with a gas furnace.
5/20-5/24	Demonstrate skills obtained throughout the year on how to properly follow manufacturer guidelines on installation of a system.	Install and commission a split A/C system with a gas furnace.
5/27-5/31	No school	5/27 - Memorial Day (No Students)