

HEATING & AIR CONDITIONING SERVICE TECHNOLOGY

Analyze, troubleshoot, and work on HVAC units. Students earn their 10 hour OSHA certification and prepare for their EPA universal certification. Students will utilize Interplay Learning simulations and z-Space 3-D software alongside live equipment and trainers. Internships available in the second semester.

heating systems | ventilation systems | air conditioning systems | customer communication | repairing and replacing mechanical parts | electrical HVAC

Suggested Abilities

- ▶ 8th grade English reading, writing, speaking, and listening
- ▶ Understand basic algebra
- ▶ Lift 50 pounds
- ▶ Sustained activity for 5 hours at a time

Prerequisites

- ▶ *High School Students: Meet with counselor for eligibility requirements*

Class Hours

- ▶ Morning: 8:40am - 11:30am, Mon. - Fri.
- ▶ Afternoon: 12:10pm - 3:00pm, Mon. - Fri.
- ▶ Evening: 5:30pm - 9:30pm, Mon. - Thu.

SEMESTER 1

HVA 1003 Basic Electricity

3 credits

Covers the basic electrical AC theory, including the study of Ohm's Law to explain the operation of electrical devices.

HVA 1010 Fundamentals of Gas Heating

4 credits

Gas heating fundamentals through classroom and shop work: system basics, gas valves and burners, electric furnaces, hydronics, and heat pumps.

HVA 1046 Residential Load/Duct Design

4 credits

Residential HVAC sizing: calculate accurate heating and cooling loads, select properly sized equipment.

HVA 2002 Troubleshooting & Customer Service

3 credits

Covers field analysis of malfunctions on actual, in-house, heating, ventilation, and air conditioning equipment. Customer interaction and diagnosis efficiency are stressed.

HVA 2040 Servicing Forced Air Systems

4 credits

Operation, repair, and maintenance of forced-air heating systems, furnace types, diagnostics, customer relations, and workplace behavior.

OSH 1300 10HR OSHA Voluntary Compliance

1 credit

10-hour OSHA General Industry course covering 29 CFR 1910 standards. Taught by OSHA-certified instructors. Completion awards an OSHA certificate of completion from the U.S. Department of Labor.

SEMESTER 2

HVA 1002 Basic Refrigeration

4 credits

Introduces the theory of refrigeration, components, charging, recycling, and evacuation of air conditioning units.

HVA 1006 Intro to Service Tech Training

1 credit

Foundational overview for aspiring Service Technicians covering policies, safety, first aid, and basic physics related to heat, matter, and energy.

HVA 1011 Piping Skills for HVAC

4 credits

Covers HVAC tubing and piping materials, installation methods, cutting, bending, pipe math, offsets, joints, brazing, and soldering.

HVA 1013 Refrigerant Recovery Training

1 credit

Explains the laws regarding refrigerant recovery. The course includes hands-on use of recovery equipment. EPA certification is part of this course, students must pay \$40.00 for this optional exam.

HVA 2061 A/C Systems Service and Repair

4 credits

Emphasizes the service of HVAC systems. Troubleshooting techniques and equipment repair will be practiced.

HVA 2085 Independent Study

2 credits

Students will work with the instructor on a specific area with specific objectives and a predetermined project completion date.

Heating & Air conditioning Service Technology Certificate

1 year

35 Credit Hours



Information Revised MAR'26. Information subject to change. Course listings have been paraphrased on this flyer, for full course info please see Pickens Catalog. This certificate is eligible for Financial Aid. If you have further questions, please call (303)344-4910.