

JOB DESCRIPTION

Works on heating, ventilation, cooling, and refrigeration systems that control the temperature and air quality in buildings.

HVAC technicians:

- Install, clean, and maintain HVACR systems
- Install electrical components and wiring
- Inspect and test HVACR systems and components
- Discuss system problems with customers
- Repair HVAC systems to improve efficiency by changing filters, cleaning ducts, or replacing refrigerant
- Test pipe or tubing joints and connections for leaks
- Recommend maintenance to improve system performance
- Keep records of work performed

PAY

\$59,810 median annual wage (\$28.75/hour)
as of May 2024

JOB OUTLOOK

9% (much faster than average), 2023-2033

EDUCATION & TRAINING

An associate degree is typically preferred, but not required. Candidates must pass the North American Technician Excellence (NATE exam). The U.S. Environmental Protection Agency (EPA) also requires all technicians who buy, handle, or work with refrigerants to be certified in proper refrigerant handling.

IMPORTANT SKILLS

- **Customer-service skills**, including punctuality, friendliness, and politeness, even when working with unhappy customers
- **Attention to detail** in order to maintain records of the nature of the work performed, time spent, and specific equipment/parts used
- **Knowledge of the building and construction process**
- **Logic:** Ability to use and/or develop a knowledge of electrical circuits and read blueprints and charts
- **Manual Dexterity:** Ability for excellent eye and hand coordination
- **Math skills:** Ability to solve high school-level algebraic equations, fractions, decimals, etc. in order to calculate correct load requirements to ensure the HVACR equipment properly heats or cools the space required
- **Mechanical skills** to understand the HVAC components and be able to properly assemble, disassemble, and, if needed, program them
- **Physical stamina/strength** for long hours walking, standing and lifting heavy equipment
- **Time-management skills** Ability to keep a schedule and complete all necessary repairs or tasks in a timely manner
- **Troubleshooting skills** Ability to identify and repair problems on malfunctioning heating, air conditioning, and refrigeration systems

CERTIFICATE/TRAINING PROGRAMS

ASHTABULA COUNTY TECHNICAL & CAREER CAMPUS (*Jefferson, OH*)

A 300-hour **HVAC Program** covering residential air conditioning, refrigeration, heating, and troubleshooting. Program includes recent legislation regarding environmental control for Freon recovery, safety and laws. Earns college credit through Franklin University. Program certifications include:

- Environmental Protection Agency (EPA) 608 Certification
- Universal Safety R410 Certification
- Ohio Construction Industry Licensing Board (HVAC)

<https://www.atech.edu/>

CERTIFICATE/TRAINING PROGRAMS (*continued*)

AUBURN CAREER CENTER (*Concord Twp*)

A 600-hour **HVAC Workforce Program** covering electrical, heating, heat pumps, duct installation, air distribution, hydronics, refrigeration, cooling, and air conditioning. Prepares students for:

- OSHA 10-Hour General Industry Certification
- EPA Section 608 and R410A Certification
- CFC Refrigeration Recovery Certification

www.auburncc.org/Programs.aspx

CLEVELAND STATE UNIVERSITY (*Cleveland*)

A four- to six-month **online HVAC Technician certification course** to prepare students for entry-level HVAC maintenance and repair tasks in residential and commercial environments. Prepares students for:

- Environmental Protection Agency (EPA) 608 Core Certification
- 608 Small Appliances (Type 1) Certification

www.csuohio.edu2.com/product/5094/hvac-technician

CUYAHOGA COMMUNITY COLLEGE

(*Cleveland*)

Associate of Applied Science in Industrial Maintenance

Students learn how to diagnose and maintain HVAC industrial boiler systems.

www.tri-c.edu/programs/engineering-technology/integrated-systems-engineering-technology/index.html

CUYAHOGA VALLEY CAREER CENTER

(*Brecksville*)

This 200-hour **HVAC Technician Training Program** emphasizes hands-on activities and problem-solving skills; prepares students for the CFC Section 608 Certification

www.cvccworks.edu/adult-education/adult-education-programs/hvac/

FORTIS COLLEGE (*Cuyahoga Falls*)

A **HVAC and Refrigeration Program** that combines classroom instruction and lab modules to prepare student for entry-level HVAC employment. Prepares students for EPA certification.

www.fortis.edu/campuses/ohio/cuyahoga-falls/hvac.html

LAKE ERIE COLLEGE (*Painesville*)

This **HVAC Training Program** is five semesters or quarters. It prepares students for:

- OSHA 30-Hour Safety Certification
- ESCO Electrical Certificate
- ESCO Gas Heating Certificate
- ESCO Combustion Analysis & Fuel Efficiency Certificate
- EPA Section 608 Certification

www.lec.edu/hvacr/

POLARIS CAREER CENTER (*Middleburg Hts*)

600-hour **HVAC/R Program** (20 weeks-days, 35 weeks-evenings). Prepares students for:

- 608 EPA Certification
- OSHA 10-Hour Certification

www.polaris.edu/o/pcc/page/hvac

ADDITIONAL RESOURCES

PHCC Academy Plumbing & HVAC Workforce Readiness Course - A free course for students that provides an introduction to working in the plumbing-heating-cooling industry and helps them to make decisions about their career path in the industry.

www.phccacademy.org/workforce-readiness-course/

Sheet Metal Workers Local 33: <https://smwlu33.org/>

Cleveland Building and Construction Trades Council: www.cbctc.org/