

HVAC Technicians

About my job:

As a HVAC (heating, ventilation, air conditioning, and refrigeration) technician, I work on heating, ventilation, cooling, and refrigeration systems that control the temperature and air quality in buildings.



What I do every day:

- Test pipe or tubing joints and connections for leaks, using pressure gauge or soap-and-water solutions
- Test electrical circuits or components for continuity
- Repair and replace malfunctioning equipment, components and wiring
- Discuss heating or cooling system problems with customers to isolate problems or to ensure that repairs have corrected malfunctions
- Repair HVAC systems to improve efficiency by changing filters, cleaning ducts or replacing refrigerants

What makes my job great?

Job growth:

Employment of HVAC technicians in the state of Ohio is projected to grow 20 percent from 2012 to 2022.

Short-term training:

Employers generally prefer applicants with postsecondary education or those who have completed an apprenticeship. Some states and localities require technicians to be licensed.

Good pay:

The median salary for HVAC technicians in the state of Ohio is \$43,320. (That means that 50 percent of HVAC workers earn less and the other 50 percent earn more.)

Apprentices usually earn about half the wage of an experienced HVAC technician. However, as their experience increases, their pay also increases.

Benefits:

Most HVAC technicians work full time with benefits that may include:

- **Healthcare**
- **Paid vacation**

How can you become an HVAC technician?



Academic/training credentials:

An associate degree is typically preferred, 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.

Skills and requirements:

- Knowledge of machines and tools required for the job
- Customer service skills
- Knowledge of the building and construction process
- Sensitivity to determining problems that may arise
- Manual dexterity

Potential job titles:

- HVAC mechanic
- HVAC service technician
- HVAC specialist
- HVAC technician
- Service technician
- Systems mechanic

Where you can find jobs:

- Online job boards
- Career fairs
- Networking
- Social media (LinkedIn, Facebook, Twitter)
- Individual company websites
- Department of Career Services at colleges

Potential local employers:

Potential local employers include heating and air conditioning companies such as Anderson Heating and Cooling, as well as in-house positions at all large companies.



Local educational opportunities

Two-year institutions:

- Lakeland Community College: Community Resource department, Center for Business and Industry, HVAC basic and advanced
- Cuyahoga Community College: Associate of Applied Science in Industrial Maintenance

Four-year institutions:

- Cleveland State University: Bachelor of Science in mechanical engineering

Internships:

Some technicians receive their training through an apprenticeship program, which usually lasts 3 to 5 years. Each year, apprentices must have at least 2,000 hours of on-the-job training and a minimum of 144 hours of related technical education.



High School/Technical prep:

- A-TECH: building maintenance technology
- Auburn Career Center: heating, ventilation and air conditioning
- Lake Shore Compact: heating, ventilation and air conditioning
- Excel TECC: construction trades program



Coursework per educational entity:

Secondary pathway:

Mechanical, Electrical and Plumbing

Postsecondary program:

HVAC

An Example of Course with Secondary and Postsecondary Credits

Secondary	7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Core & Sustainable Construction		
	9 10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Mechanical, Electrical, & Plumbing Sys.	Heating & Cooling Systems	World Languages
	11	English III	Algebra II	Chemistry	U.S. History	HVAC Refrigeration	World Languages		
	12	English IV	Trigonometry/Calculus	Environmental Science	U.S. Government	Sheet Metal	Construction Safety & Leadership		
Postsecondary	Year 1 1st Semester	English	Technical Math	College Seminar	Electricity	Basic Refrigeration	Intro to Computers		
	Year 1 2nd Semester	Interpersonal Communication	Heating Systems I	Installation Fundamentals	Refrigeration Control Systems	Refrigeration Handling	Social Science Elective		
	Year 2 1st Semester	Business Law	Heating Systems II	CAD	Duct Layout & Prints	Basic Refrigeration II	Environmental Science		
	Year 2 2nd Semester	Capstone	Climate Control	HVAC Design	Workplace Safety	Humanities Elective			

High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

Visit education.ohio.gov/CareerConnections for reference information.

Course titles and sequences will vary between schools.

10/2014

Ohio | Department of Education

Ohio
MEANS
Jobs.

Ohio | Board of Regents
University System of Ohio

How can I grow my career?



Where could I focus or specialize in my career?

- Service technician
- Field manager
- Operation manager
- Distribution manager

The career ladder



Sources/References:

Ohio Means Jobs, Bureau of Labor Statistics – Occupational Outlook Handbook

O*Net Online-Summary Report, Ohio Labor Market Information