

# HVAC

(Heating/Ventilating and Air Conditioning)

*Warm and Toasty...*

### Necessary Skills:

- Critical Thinking
- Problem Sensitivity
- Control Precision
- Communication
- Physical Strength
- Manual Dexterity
- Visualization
- Deductive Reasoning
- Reading & Interpreting



### Keeping the temperature temperate!

Heating and air-conditioning systems control the temperature, humidity, and the total air quality in residential, commercial, industrial, and other buildings. *Heating, air-conditioning, and refrigeration mechanics and installers*—also called *technicians*—install, maintain, and repair such systems

Heating, air-conditioning, and refrigeration systems consist of many mechanical, electrical, and electronic components, such as motors, compressors, pumps, fans, ducts, pipes, thermostats, and switches. Technicians maintain, diagnose, and correct problems throughout the entire system. To do this, they adjust system controls to recommended settings and test the performance of the system using special tools and test equipment.

**Work & Wages**

HVAC Technician:  
 \$12-22/hr

Highly skilled HVAC Techs are sought by numerous employers in Southwest Pennsylvania!

Sources: bls.gov  
 cwds.state.pa.us

**Program of Study advantage:**  
 By completing all of your task list and NOCTI tests, you will be eligible to receive Articulated Credits (college credit for CTC classes) toward your Associates Degree—saving you time and \$\$\$!

### JOB DEMANDS

Working as an HVAC Tech is not for everyone.

Most jobs in this field require a great deal of physical exertion, moving constantly and repetitively.

HVAC Techs work on equipment mounted on roofs and exposed to the elements. Many HVAC components are located in confined spaces such as basements, crawl spaces, and ceiling bays.

HVAC maintenance requires the use of dangerous chemicals and equipment.

### Take the Right Classes !

<p><b>Math</b></p> <ul style="list-style-type: none"> <li>Algebra I</li> <li>Algebra II</li> <li>Geometry</li> <li>College Prep Math (recommended)</li> </ul>	<p><b>English</b></p> <ul style="list-style-type: none"> <li>College Prep English I</li> <li>College Prep English II</li> <li>College Prep English III</li> <li>College Prep English IV</li> </ul>	<p><b>Science</b></p> <ul style="list-style-type: none"> <li>Biology</li> <li>Chemistry</li> <li>Physics</li> </ul> <p><b>Humanities</b></p> <ul style="list-style-type: none"> <li>Civics</li> <li>U.S. History</li> <li>World History</li> </ul>
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**pennsylvania**  
DEPARTMENT OF EDUCATION  
**PROGRAMS OF STUDY**

## Heating, A/C, Ventilation & Refrigeration Technology/ Technician CIP #47.0201

Colleges that are participating in the Statewide Articulation Agreement for this program include:

Westmoreland County Community College  
Community College of Allegheny County  
Delaware County Community College  
Reading Area Community College  
Johnson College  
Butler County Community College  
Thaddeus Stevens College of Technology



### Notice of Non-Discrimination

The Connellsville Area School District is an equal opportunity employer and educational institution and will not discriminate on the basis of race, color, national origin, sex, disability or age in its activities, programs or employment practices as required by Title VI, Title IX and Section 504. Inquiries or grievances should be directed to Karen Marko 724-628-3300

### Clothing/Safety requirements:

**1<sup>st</sup> Year:** Black Short-Sleeved Coveralls, Leather Shoes or Boots. EPA Test Fee (Approx \$ 27.00)

**2<sup>nd</sup> Year:** Black Short-Sleeved Coveralls, Leather Shoes or Boots. EPA Test Fee (Approx \$ 27.00)

**3<sup>rd</sup> Year:** Black Short-Sleeved Coveralls, Leather Shoes or Boots. EPA Test Fee (Approx \$ 27.00)

### Certifications offered:

EPA Refrigerant Handling License

OSHA 10 hour Construction Industry Certificate

NOCTI: PA Skills Certificate: Heating Ventilations and Air Conditioning

### Student Organization:

## HVAC COMPETENCY TASK LIST

1st Year (360 Hours)	2nd Year (360 Hours)	3rd Year (360 Hours)
The Construction Industry (39)	Safety (30)	Safety (30)
Safety (52)	Air Distribution Systems (101)	Electric Heating (43)
Construction Mathematics (65)	System Connections (39)	Gas Furnaces (68)
Tools and Fasteners (111)	Start Up and Service (190)	Oil Furnaces (57)
Print Reading (93)		Hydronic Heat (78)
		Heat Pumps (44)
		Basic Sheet Metal (40)