BARR CONSTRUCTION INSTITUTE

HVAC/R APPRENTICESHIP

All students start out with basic safety and construction jobsite skills. After learning the basics, they continue on to advanced HVAC/R skills in year four. Classtime is split between traditional class lectures and practical lab time where students have the opportunity to apply what they have learned.

LEARN MORE:
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www.hagerstowncc.edu/bci
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Barr CONSTRUCTION INSTITUTE @ HCC

Located at:
D.M. Bowman Family Workforce Training Center
562 Northern Avenue
Hagerstown, MD 21742

WWW.HAGERSTOWNCC.EDU/BCI

HVAC/R Apprenticeship Courses

Level One:

- Basic Safety
- Introduction to Construction Math
- Introduction to Hand Tools
- Introduction to Power Tools
- Introduction to Construction Drawings
- Introduction to Basic Rigging (7.5 elective hours)
- Basic Communication Skills (3 hours)
- Basic Employability Skills
- Introduction to Materials Handling
- Introduction to HVAC
- Trade Mathematics
- Basic Electricity
- Introduction to Heating
- Introduction to Cooling
- Air Distribution Systems
- Basic Copper and Plastic Piping Practices
- Soldering and Brazing
- Basic Carbon Steel Piping Practices

Level Two:

- Customer Relations
- Basic Maintenance
- Fasteners and Hardware
- Alternating Current
- Compressors
- Metering Devices
- Refrigerant and Oils
- Leak Detection, Evacuation, Recovery, and Charging
- Heat Pumps
- Indoor Air Quality
- Air Quality Equipment
- Chimneys, Vents, and Flues

Level Three:

- Fasteners, Hardware, and Wiring Terminations
- Control Circuit and Motor Troubleshooting
- Troubleshooting Cooling
- Troubleshooting Heat Pumps
- Troubleshooting Gas Heating
- Troubleshooting Oil Heating
- Zoning, Ductless and Variable Refrigerant Flow Systems
- Commercial Hydronic Systems
- Steam Systems
- Retail Refrigeration Systems
- Customer Relations

Level Four:

- Water Treatment
- Indoor Air Quality
- Energy Conservation Equipment
- Building Management Systems
- Air System Balancing
- System Startup and Shutdown
- Construction Drawings and Specifications
- Heating and Cooling System Design
- Commercial and Industrial Refrigeration Systems
- Alternative Heating and Cooling Systems
- Fundamentals of Crew Leadership