

Carroll County Career & Technology Center



The HVAC Program includes instruction in air conditioning, refrigeration, heating, and sheet metal. The air conditioning and refrigeration component includes instruction in sizing, layout, installation, and maintenance of oil, gas, electric, and heat pump forced air heating systems. Also, the students study residential type air conditioning and light commercial refrigeration. Repair of old systems is also covered. The students are instructed on work layouts, reading blueprints and drawings. The sheet metal component includes instruction on cutting and assembling ductwork.

Major Units of Study

- Basic commercial refrigeration
- Basic electricity
- Blueprint reading
- Compressors
- Electric motors
- Electronic air-cleaning
- Energy management systems
- Equipment installation
- Heat Pumps
- Layout, & installation
- Refrigerant Recovery
- Sheet metal layout and design

Related Careers

- Licensed Air -Conditioning Refrigeration Specialist
- Licensed Air-Conditioning Specialist
- Licensed Plumber
- Oil Burner Mechanic
- Pipe Fitter
- Plumbing Inspector
- Sheet Metal Worker
- Steam Fitter

Post-Secondary

- Apprentices Programs
- Articulated with the Associated Builders & Contractors, Inc. apprenticeship program
- Articulated with the Community College of Baltimore County
- Colleges
- Military Services
- On-the-job Training
- Technical Schools



Certifications

- Refrigerant Recovery

Visit the Carroll County Career and Technology Center website:
<http://www.carrollk12.org/ctc/>

COMPLETER: *Heating, Ventilation, Air Conditioning* CREDITS: 6

- Guideline for Course Selections
- Refer to Graduation Requirements in the Program of Studies for specific course requirements in each content area

Grade →	9	10	11	12
Exact scheduling depends on student's plan and school's master schedule.	English 9 (1)	English 10 (1)	English 11 (1)	English 12 (1)
	US Government (1)	US History (1)	World History (1)	
	Conceptual Physics (1)	Chemistry (1)	Biology (1)	
	Algebra I / Data Analysis (1)	Intermediate Algebra / Data Analysis (1)	Geometry (1)	Algebra II / Data Analysis (1)
	PE (.5) / Health (.5)		PE (.5) / Financial Literacy (.5)	
	Fine Arts (1)	Foundations of Technology (1)		
	World Language (1)	World Language (1)		
Completer Program Requirements			HVAC I (3)	HVAC II (3)
Career Specific Electives (may be taken any year offered after prerequisites have been satisfied)	Advanced Design Applications (1), Technological Design (1), Math Elective beyond Alg. II/DA (.5-1), Business Communications & Keyboarding (1), Public Speaking (.5), Technological Issues & Impacts (1), Work-Based Learning Experience (.5-1)			
8 credits possible per year				
Value Added: From: Program:	6 Articulated Credits Community College of Baltimore County, Catonsville Construction Technology	6 Articulated Credits University of Northwestern Ohio Commercial HVAC & Refrigeration		Up to 1 year toward Apprenticeship Associate Builders and Contractors
End of Program Test: Industry: Taken:	NCCT Academic Core v2 National Center for Construction Education and Research (NCCER) At the end of HVAC I		NCCT Academic HVAC National Center for Construction Education and Research (NCCER) At the end of HVAC II	

ADA STATEMENT

The Board of Education of Carroll County does not discriminate on the basis of disability in employment or provision of services, programs or activities. Information concerning the Americans with Disabilities Act is available from the Director of Facilities, 410-751-3177. Persons needing auxiliary aids and services for communication should contact the Office of Community and Media Relations at 410-751-3020 or publicinfo@carrollk12.org, or write to Carroll County Public Schools, 125 North Court Street, Westminster, Maryland 21157. Persons who are deaf, hard of hearing, or have a speech disability, use Relay or 7-1-1. Please contact the school system at least one (1) week in advance of the date the special accommodation is needed.