

The Henrico County Advanced Career Education (ACE) Centers offer training opportunities in the following areas for the 2016-2017 school year:

**ADVANCED CAREER EDUCATION (ACE) CENTER at HERMITAGE**  
804-756-3020

Air Cond., Refrigeration & Plumbing	Graphic Communications
Automotive Technology	Greenhouse Management
Barbering	Landscaping
CAD - Computer-Aided Drafting & 3D Animation	Legal Systems Administration
Cosmetology	Medical Systems Administration
Criminal Justice	Nurse Aide
Culinary Arts	Practical Nursing I
Diesel Technologies	Precision Machining Technology
Electricity & Cabling	Sports Medicine
Emergency Medical Technician	Veterinary Assistant
	Web Development/Programming

**ADVANCED CAREER EDUCATION (ACE) CENTER AT HIGHLAND SPRINGS**  
804- 328-4075

Auto Body Repair	Electricity & Cabling
Automotive Technology	High Tech Academy
Carpentry	Tourism Marketing and Sales
Computer Systems Technology	Masonry
Cosmetology	Nurse Aide
Criminal Justice	Pharmacy Technician
Early Childhood Education & Services	Practical Nursing I
	Radio Broadcasting & Journalism

Henrico County Public Schools does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment or provision of programs, services, or activities. Reasonable accommodation will be provided upon request for individuals with disabilities.

For additional information, please contact a counselor in your school or write or call:

Career and Technical Education Department  
Henrico County Public Schools  
3751-C Nine Mile Road, Henrico, VA 23223-0420  
(804) 781-1810  
HENRICOCTE.COM



**REFRIGERATION & PLUMBING**



**AIR CONDITIONING, REFRIGERATION, & PLUMBING I**  
Elective            36 weeks - 3 credits            Course No. 8503  
**Prerequisite: Recommendation of Counselor**

The course is designed to provide students with the basic knowledge and skills necessary for installation and servicing air conditioning, heating, and refrigeration systems. Emphasis will be placed on use of tools and materials, basic refrigeration principles, basic electricity, and familiarization with various residential and commercial systems. Students will have the opportunity to earn the 10-hour OSHA certification.

**AIR CONDITIONING, REFRIGERATION, & PLUMBING II**  
Elective            36 weeks - 3 credits            Course No. 8504  
**Prerequisite: Air Conditioning, Refrigeration, and Plumbing I**

The second-year course is a continuation of some fundamentals with emphasis on a 10-hour OSHA safety course and duct work, air distribution, instrumentation, controls, and trouble-shooting. With approval and recommendation of the teacher, students may spend time in actual work experience on the job during the second semester. Students enrolled in this program may participate in the construction of a house managed by the Henrico County Vocational/Technical Education Foundation.

**Major Units of Study**

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|---|--|
| 1) Cooling & heating (electricity & heat pumps) | 5) Trouble shooting of equipment & systems         |
| 2) Humidity control                             | 6) Diagnosis & repair of heating & cooling systems |
| 3) Pumps, compressors, electric motors          | 7) Welding, brazing & soldering                    |
| 4) Basic plumbing                               | 8) Basic electricity & electronics                 |

**Desirable Aptitudes**

Mechanical aptitude, an interest in electricity, and good physical condition are desirable traits for entering this field.

**Recommended Courses**

A good mathematical, physical science, and technical drawing background would be very helpful for one entering this field of study.

**Salaries**

Hourly rates vary based on the education, certification and experience of the individual; however, skilled mechanics' wages rank high among the skilled trades.

**Employment Outlook**

The demand for air conditioning, refrigeration, and plumbing mechanics is expected to continue to increase due to the technological growth in residential and commercial climate-control systems and the continued increase in the use of refrigeration in the storage, transportation, and marketing of commercial products.

Students who take this course will be eligible to take the:

- 1) National Certification exam for E.P.A. refrigerant usage
- 2) ASE (Automotive Service Excellence), A/C, Recycling and Recovery certification
- 3) 10-hour OSHA safety certification

*This class is taught at  
Hermitage Technical Center.*