

## **HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION**

The Heating, Ventilation, Air Conditioning & Refrigeration Technology (HVAC/R) program is designed to provide each student with the opportunity to learn the fundamental and advanced competencies required to succeed in this discipline. The curriculum is divided into 50% theory and 50% application of theory through numerous demonstrations, labs, in-class projects along with service and maintenance of the schools systems. Students will be prepared for and dressed appropriately in work attire as service seldom is scheduled.

Students will be required to sit for and certify at the Universal Technician level of the Environmental Protection Agency mandated refrigerant Recovery, Recycling and Reclamation exam. For your convenience, the exam is taken in class at minimal cost to the student. Any company at which a graduate would seek employment requires the same level of certification. Students will also be required to successfully complete the Air Conditioning & Refrigeration Institute (ARI) / Gas Appliance Manufacturers Association (GAMA) entry level Residential Air Conditioning and Heating exam and the R-410a Safety Certification, also at minimal cost to the student and taken in-house. These exams are recognized nationally and add credence to a graduates resume'.

Prerequisites for entry into the program include a High School diploma or satisfactory completion of the General Equivalency Degree (GED). Students will be tested upon entry into the program for required levels of general competency in basic education and remediation may be required in deficient areas.

Work-Based Learning, in the form of a cooperative agreement or internship is available to students in good standing only. The Instructor and James Rumsey Technical Institute reserve the right to refuse these privileges to students in academic, and or attendance dilemma. This opportunity is viewed as a privilege and there are many guidelines and rules to be followed and deficiency in any will result in termination of the agreement. The agreements will be reviewed by the Instructor, Assistant Principal and Work Based Learning Coordinator and will be allowed to commence upon review on or around the beginning of Summer-1, about the second week of May.

Class meets Monday through Friday starting at 8:00 am and ending at 2:40 pm daily. Promptness and attendance are important and will be monitored appropriately. Deductions will be taken for both, and those not complying with the parameters specified by the state of West Virginia for graduation from a Post Secondary program, will not graduate. These parameters will be discussed in detail in the Attendance section of the Syllabus.

**Students are encouraged to dual enroll in the collaborative program with Blue Ridge Community and Technical College. For a minimal registration fee, students will receive up to 45 possible credit hours of a required 65 credit hours towards an Associate of Applied Science Degree in Heating, Ventilation, Air Conditioning and Refrigeration.**

### **Associate of Applied Science Degree in Heating, Ventilation, Air Conditioning & Refrigeration**

This program prepares students to install, maintain, and repair equipment and accessory units for commercial, residential, and industrial usage. Students study the repair of home appliances, such as icemakers, window air conditioners, freezers, and refrigerators as well as the servicing of commercial air conditioning systems and heat pumps.

The Heating, Ventilation, Air Conditioning & Refrigeration Associate Degree Program, is a cooperative effort of Blue Ridge CTC and James Rumsey Technical Institute, located near Martinsburg, WV. Students must apply for admission to both Blue Ridge Community and Technical College and to James Rumsey Technical Institute.

Students in the Heating, Ventilation, Air Conditioning, and Refrigeration Program are subject to the Blue Ridge Community and Technical College's requirements for admissions, basic skills testing, and appropriate course placement, including mandated developmental courses, which are not counted toward completion of the program. Blue Ridge CTC Catalog requirements regarding academic standards, student conduct, and graduation procedures also apply.

**Total Credit Hours Required 65**

<b>Curriculum for an Associate of Applied Science Degree in Heating, Ventilation, Air Conditioning &amp; Refrigeration</b>			
<b>James Rumsey Courses</b>	<b>Credits</b>	<b>BRCTC General Education Courses</b>	<b>Credits</b>
HVAC 111 Fundamentals of HVAC	4	ENGL 101 Written English I or ENGL 110 Technical Writing	3
HVAC 112 Refrigerant & Electric & Motors	4	COMM 202 Fundamentals of Speech or CBUS 105 Written Communication	3
HVAC 113 Refrigerants & Small Service	4	MATH 105 Algebra OR CBUS 103 Basic Accounting Fundamentals	3
HVAC 114 Systems, Install, Apps, & Design	4	CGEN 101 Career Transition	1
HVAC 115 Special Apps & Intro to Air Cond.	4	OFTC 102 Microsoft Office Apps-Intro 3	3
HVAC 116 Complete Air Conditioning	4	CAHS 103 General Physical Science & Lab 4	4
HVAC 117 Systems Control & Load Calc	4	PSYC 203 Introduction to Psychology or SOC1 203 General Sociology	3
HVAC 118 Automotive Air Conditioning	4	<b>Total Credit Hours Required 20</b>	<b>20</b>
HVAC 293 On-the-Job-Training	1 -13		
<b>Total Credit Hours Possible</b>	<b>45</b>		
<b>Certifications required for graduation:</b>			
Industry Based competency exams			
1. ARI-ICE: Residential Air Conditioning			
2. ESCO INST.I-EPA: Universal Required			
3. R-410a Safety Certification			