

HEATING, VENTILATION, AIR CONDITIONING, REFRIGERATION, CERTIFICATE OF COMPETENCY (HVA)

Effective: Fall 2023

The Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) occupations program prepares graduates for employment with HVAC&R installation and service contractors and/or facilities maintenance positions. Students completing the program also receive EPA Refrigerant Certification. Having achieved the competencies of this program, students are prepared for full-time employment at an entry-level position or, if already in the fields, to advance in their organization.

Program Outcomes

Upon successful completion of this program, students should be able to:

- Demonstrate knowledge of the principles, properties and functions of residential and light commercial HVAC&R components and systems.
- Use appropriate tools and materials to size, install, service and/or repair HVAC&R equipment and systems.
- Interpret and use pressure and vacuum charts, blueprints and wiring diagrams for HVAC&R systems.
- Troubleshoot and diagnose malfunctions in HVAC&R systems.
- Use computational skills to solve problems in electrical, heating, air conditioning and refrigeration systems.
- Employ occupational health and safety principles and practices.

Full-Time Academic Plan

The College will award a certificate of competency to students who complete an approved credit-bearing career program that requires less than 30 credits. General education courses may not be required for programs that have less than 30 credits. The student must have a cumulative GPA of 2.0 or higher. At least six credit hours must be in courses that are awarded grade points.

First Semester		Hours
HVA 100	Introduction to Heating, Ventilating, Air Conditioning and Refrigeration Electrical Fabrication	2
HVA 101	Introduction to Refrigeration and Air Conditioning	2
HVA 103	Advanced Refrigeration and Air Conditioning	2
HVA 104	Practical Problems in Mathematics for HVAC&R Technicians	3
HVA 200	Advanced HVAC&R Electrical Fabrication	2
HVA 201	Refrigerant Certification	3
Hours		14
Second Semester		
HVA 106	Basic Piping for Contractors	2
HVA 202	Oil and Gas Burner Service	2
HVA 203	Heat Pumps	3
TCS 100	Construction Blueprint Reading	3
Hours		10
Total Hours		24

Part-Time Academic Plan

Part-Time Evening Schedule

Certain HVA specific courses in the Heating, Ventilation, Air Conditioning, and Refrigeration, Certificate program rotate depending on the semester a student begins. Students who do not begin in a Fall semester when HVA 100 and HVA 200 are being offered should start with one or two classes from the list of "any semester" courses. Students with some HVA experience may also seek approval to begin with HVA 101 and HVA 103 by permission of the program director.

Students with advising questions should speak to the Director of Technical Education @ 610-325-2819.

Code	Title	Hours
First Semester		
<i>Offered Fall Only</i>		
HVA 100	Introduction to Heating, Ventilating, Air Conditioning and Refrigeration Electrical Fabrication	2
HVA 200	Advanced HVAC&R Electrical Fabrication	2
Second Semester		
<i>Offered Spring Only</i>		
HVA 101	Introduction to Refrigeration and Air Conditioning	2
HVA 103	Advanced Refrigeration and Air Conditioning	2
Third Semester		
HVA 201	Refrigerant Certification	3
Any Semester Course *		
Fourth Semester		
HVA 202	Oil and Gas Burner Service	2
Any Semester Course *		
Fifth Semester		
HVA 203	Heat Pumps	3
Any Semester Course *		
Any Semester *		
HVA 104	Practical Problems in Mathematics for HVAC&R Technicians	3
HVA 106	Basic Piping for Contractors	2
TCS 100	Construction Blueprint Reading	3
Total Hours		24

* **Any Semester Course** may be taken in any order.

Career

Career Information for this Program

Heating, Ventilation, Air Conditioning, Refrigeration (Certificate)

Career Coach

Browse or search for careers and we will give you relevant data on wages, employment, and the training you need.

DCCC Career and Counseling Services

Faculty and staff in Career & Counseling Services are eager to help you become successful in college and in life. We offer services to assist you

at any point in your academic journey and we tailor our approach to meet your individual needs.