

Heating, Ventilation, and Air Conditioning (HVAC)

Career Studies Certificate (C.S.C.)

Purpose

The certificate is designed to prepare students for employment as competent technicians in Heating, Ventilation, and Air Conditioning (HVAC). Students will have the opportunity to earn a nationally recognized credential through the EPA certification examination. Classes count toward the Journeyman and Master state license in HVAC.

Program Requirements and Special Conditions

Students must maintain a 2.0 GPA.

Program Learning Outcomes

Students will:

- Read and interpret electrical diagrams, wire control systems from electrical diagrams, and repair faults in electrical control systems.
- Properly size and install HVAC systems using current and appropriate codes and industry practices.
- Diagnose, repair faults, and perform maintenance on HVAC systems.

Program Curriculum and Suggested Sequence of Courses

1 st Semester	Credits	Course Options
AIR 121 Air Conditioning and Refrigeration	3	See Note 2
ELE 118 Practical Electricity	2	
AIR 276 Refrigerant Usage EPA Certification	1	See Note 2
IND 103 Industrial Methods	2	
SAF 130 Industrial Safety	1	
<i>Total Credits</i>	9	
2 nd Semester	Credits	Course Options
AIR 138 Small Hermetic Commercial Systems	3	
AIR 154 Heating Systems	3	
AIR 235 Heat Pumps	3	
ELE 156 Electrical Control Systems	3	See Note 3
<i>Total Credits</i>	12	
Total Credits For Program	21	

Notes and Additional Curriculum Options

1. Part-time students should consult their faculty advisors regarding appropriate course sequences.
2. AIR 121 and AIR 276 are co-requisites and must be taken together.
3. ELE 118 is a pre- or co-requisite for ELE 156.

Certifications

Courses in this program may help students attain the following license(s) or certification(s):

- EPA Section 608 Technician Certification, U.S. Environmental Protection Agency
- Journeyman Heating, Ventilation & Air Conditioning, Virginia Department of Professional and Occupational Regulation
- Master Heating, Ventilation & Air Conditioning, Virginia Department of Professional and Occupational Regulation