Heating, Ventilation, and Air Conditioning

Certificate and Degree

The HVAC program offers a certificate and/or an Associate of Applied Science degree in Heating, Ventilation, and Air Conditioning Technology. The first two semesters cover the electrical and heating side of HVAC. Later semesters cover the refrigeration and airflow side of the HVAC trade.

The program utilizes the National Center for Construction Education and Research (NCCER) curriculum. NCCER is a nationally-recognized credentialing and certification system. Students completing the first two semesters will cover NCCER Core and Level 1. The remaining semesters cover NCCER Levels 2, 3, & 4.

Careers include service, installation, and sales of HVAC equipment for residential and commercial applications. Students may enter the industry in facility maintenance, manufacturing and utilities industries. Job titles include service technician, installation technician, supervisors, inspectors, independent contractors and small business owners. The job outlook for HVAC technicians in the construction, manufacturing, and utilities industries is increasing. Median earnings are $18.75/hour.

HVAC Certificate Program Outcomes

1. Demonstrate the fundamentals of electricity.
2. Demonstrate the ability to perform construction math.
3. Demonstrate the ability to correctly construct and test electrical circuits.
4. Demonstrate the ability to read HVAC blueprints.
5. Demonstrate basic employability skills.
6. Demonstrate an understanding of common hand and power tools used in the construction trades.
7. Demonstrate an understanding of heating systems used in HVAC.
8. Demonstrate an understanding of sheet metal applications.
9. Demonstrate an understanding of basic hydronic systems.
10. Demonstrate an understanding of soldering and brazing
11. Demonstrate an understanding of the refrigeration cycle and the components.
12. Demonstrate competence in troubleshooting HVAC systems.
13. Demonstrate an understanding in piping used in HVAC.
14. Demonstrate an understanding of air flow principles.

Degree Program Outcome

15. Demonstrate proficiency in application of all previous outcomes.
16. Demonstrate proficiency in all general education outcomes as related to HVAC.

Sequence of Courses

		Cr Hrs
Semester I		
HVAC 101	Workplace Skills	1
HVAC 102	General Construction Skills	4
HVAC 103	Electrical Fundamentals	4
	Total	**9**
Semester II		
CMCT 105	OSHA 10 Safety Orientation	1
HVAC 107	Heating System Fundamentals	3
HVAC 109	Heating Systems Lab	5
	Total	**9**
Semester III		
HVAC 120	EPA 608	1
HVAC 122	HVAC Fundamentals	4
HVAC 124	HVAC Lab	4
	Total	**9**
Semester IV		
HVAC 202	Advanced HVAC I	5
HVAC 204	Advanced HVAC II	4
	Total	**9**
Total HVAC Certificate Credits		**36**
Semester V	**Required for AAS Degree**	
HVAC 206	Pipefitting	3
HVAC 208	Commercial HVAC	5
ETEC 136	Industrial Internship	3
Total HVAC Credits for AAS Degree		**47**

Associate of Applied Science Option

Students interested in completing an Associate of Applied Science degree in Heating, Ventilation, and Air Conditioning should visit with an advisor to determine general education requirements. Degrees require completion of 64 credit hours. First-time, full-time students are required to take PSCY 100, First Year Seminar.

Required General Education Courses include:

ENGL 101 English Composition I, 3 cr hrs
COMM 213 Inter Personal Communication, 3 cr hrs
CSIS 100 Computer Concepts and Applications, 3 cr hrs
Additional General Education Hours to bring degree total to 64.

For more information contact:

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