

Air Conditioning, Heating, and Refrigeration

Air Conditioning, Heating, and Refrigeration

Diploma
Sioux City Campus

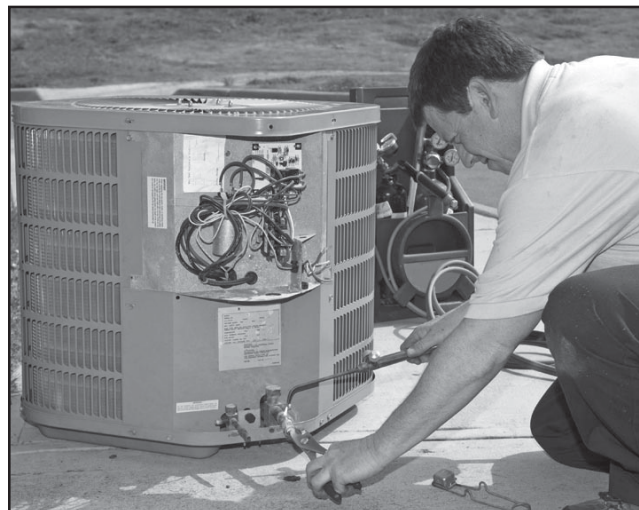
Program Overview and Opportunities:

The Air Conditioning, Heating, and Refrigeration (HVAC) program includes a study of air conditioning, heating, and refrigeration for residential and light commercial equipment. Students are trained to be HVAC technicians in a real-world, hands-on lab environment.

The HVAC facility is equipped with state-of-the-art HVAC systems including geo-thermal and other high-efficiency systems. In addition, students will have ample opportunity to work on conventional HVAC systems.

Technicians will be needed to troubleshoot and maintain HVAC systems because of the increasing number of new residential and commercial structures and to respond to the increased demand for energy management, conservation and other "green" technologies.

According to the Bureau of Labor Statistics, employment of heating, air-conditioning, and refrigeration mechanics and installers is expected to grow as fast as the average for all occupations through the year 2014. (Occupational Outlook Handbook. Bureau of Labor Statistics 2006-2007.)



Air Conditioning, Heating, and Refrigeration Curriculum

Course #	Title	Credits
+ELE 112	Basic Electrical Theory*	3
HCR 112	Heating Fundamentals	3
HCR 120	Gas Heating	3
HCR 125	Oil & Hydronic Heating	3
HCR 430	Electric Motors and Controls	3
MAT	Math General Ed Elective	3
CSC 110	Introduction to Computers	3
HCR 205	Air Conditioning Principles	3
HCR 410	Electrical Applications I	3
HCR 305	Fundamentals of Refrigeration	3
HCR 140	Heat Pumps	3
ENG/COM/LIT	English General Ed Elective	3
HCR 715	Blueprint Reading	1
HCR 850	HVACR Shop Practices	4
HCR 240	Troubleshooting Air Conditioning Systems	3
Total Credits		44

* Denotes courses commonly articulated with area high schools.
+ ELE 112 must be taken in the initial fall or spring semester of attendance.

Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

These courses form the foundation of the program and can be taken in the evening: HCR-112, HCR-305, ELE-112.

Program Advisors

Anthony Bell, AAS
Ext. 3213 Room D314 bella@witcc.edu

Greg Strong, BS, BA, Division Chair
Ext. 1480 Room A111 strongg@witcc.edu

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see an air conditioning, heating, and refrigeration program advisor to ensure correct course sequence.

Air Conditioning, Heating, and Refrigeration

Air Conditioning

Certificate
Sioux City Campus

Program Overview and Opportunities:

This certificate will prepare the student to maintain and troubleshoot residential air-conditioning equipment.

Students are trained to be cooling technicians in a real-world, hands-on lab environment. The HVAC facility is equipped with state-of-the-art and conventional air-conditioning systems in which students experience ample hands-on training.

According to the Bureau of Labor Statistics, employment of air conditioning technicians is expected to grow as fast as average for all occupations through the year 2014. As the population and number of buildings grow, so does the demand for residential, commercial, and industrial climate-control systems. (Occupational Outlook Handbook, Bureau of Labor Statistics 2006-2007.)

Air Conditioning Certificate Curriculum

Course #	Title	Credits
ELE 112	Basic Electrical Theory*	3
HCR 205	Air Conditioning Principles	3
HCR 305	Fundamentals of Refrigeration	3
HCR 140	Heat Pumps	3
Total Credits		12

* Denotes courses commonly articulated with area high schools.

Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

Some suggested courses for the part-time student include: English or math course, HCR-305, ELE-112.

Heating

Certificate
Sioux City Campus

Program Overview and Opportunities:

This certificate will prepare the student to maintain and troubleshoot residential heating equipment.

Students are trained to be heating technicians in a real-world hands-on lab environment. The HVAC facility is equipped with state-of-the-art and conventional heating systems in which students experience ample hands-on training.

According to the Bureau of Labor Statistics, employment of heating, air-conditioning, and refrigeration mechanics and installers is expected to grow as fast as the average for all occupations through the year 2014. (Occupational Outlook Handbook, Bureau of Labor Statistics 2006-2007.)

Heating Certificate Curriculum

Course #	Title	Credits
ELE 112	Basic Electrical Theory*	3
HCR 112	Heating Fundamentals	3
HCR 120	Gas Heating	3
HCR 125	Oil and Hydronic Heating	3
Total Credits		12

* Denotes courses commonly articulated with area high schools.

Program Advisors

Anthony Bell, AAS Ext. 3213	Room D314	bella@witcc.edu
Greg Strong, BS, BA, Division Chair Ext. 1480	Room A111	strongg@witcc.edu

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see an air conditioning, heating, and refrigeration program advisor to ensure correct course sequence.