

AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY

WILSON
COMMUNITY
COLLEGE



About the Program

The Air Conditioning, Heating, and Refrigeration Technology program provides the basic knowledge and skills to work with residential and light commercial systems. Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instrumentation. The associate degree covers residential building codes, residential system sizing, duct design, and advanced comfort systems.

Diploma graduates should be able to assist in the startup, preventative maintenance, service, repair, and/or installation of residential and light commercial systems. Associate degree graduates should be able to demonstrate an understanding of system selection, balancing, and advanced system concepts.



Quick Facts

- Degree, Diploma, and Certificate options offered
- Earn multiple certifications from the EPA and HVAC Excellence
- Students learn on a wide variety of equipment
- Qualified technicians are in high demand
- Great job outlook with competitive wages

The Workplace

Students learn the skill set to become a field service technician, service manager, field supervisor, installer, controls technician, contractor, inspector, facilities technician, instructor, inside/outside sales, or estimator.

Careers Available

- Service Technicians
- Electronic Controls
- Facility Managers
- Installers

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AIR CONDITIONING HEATING AND REFRIGERATION TECHNOLOGY DEGREE (A35100)

The Air Conditioning, Heating, and Refrigeration Technology curriculum provides the basic knowledge to develop skills necessary to work with residential and light commercial systems. Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. In addition, the AAS degree covers residential building codes, residential system sizing, and advanced comfort systems.

Diploma graduates should be able to assist in the startup, preventive maintenance, service, repair, and/or installation of residential and light commercial systems. AAS degree graduates should be able to demonstrate an understanding of system selection and balance and advanced systems.

COURSE & HOUR REQUIREMENTS

Course Number & Name	Class Hours	Lab Hours	Credit Hours
FALL SEMESTER			
ACA 111 College Student Success	1	0	1
AHR 110 Intro to Refrigeration	2	6	5
AHR 111 HVACR Electricity	2	2	3
AHR 160 Refrigerant Certification	1	0	1
*COM 110 Intro to Communication	3	0	3
Total	9	8	13
SPRING SEMESTER			
AHR 112 Heating Technology	2	4	4
AHR 113 Comfort Cooling	2	4	4
AHR 125 HVACR Electronics	2	2	3
ELC 125 Diagrams and Schematics	1	2	2
*MAT 110 Mathematical Measurement & Lit.	2	2	3
Total	9	14	16
SUMMER SEMESTER			
AHR 114 Heat Pump Technology	2	4	4
AHR 115 Refrigeration Systems	1	3	2
AHR 213 HVACR Building Code	1	2	2
AHR 263 Energy Management	1	3	2
***Major Elective	1/0	0/10	1
Total	5/6	12/22	11
FALL SEMESTER			
AHR 211 Residential System Design	2	2	3
AHR 212 Advanced Comfort Systems	2	6	4
AHR 240 Hydronic Heating	1	3	2
CIS 113 Computer Basics	0	2	1
*ENG 111 Writing & Inquiry	3	0	3
**Social/Behavioral Science Elective	3	0	3
Total	11	13	16
SPRING SEMESTER			
AHR 130 HVAC Controls	2	2	3
AHR 133 HVAC Servicing	2	6	4
AHR 151 HVAC Duct Systems I	1	3	2
AHR 235 Refrigeration Design	2	2	3
*HUM 115 Critical Thinking	3	0	3
Total	10	13	15
TOTAL SEMESTER CREDIT HOURS FOR DEGREE			71
<i>*SOCIAL/BEHAVIORAL SCIENCE ELECTIVE - Choose one (1) course from the following:</i>			
Course Number & Name	Class Hours	Lab Hours	Credit Hours
ECO 151 Survey of Economics	3	0	3
ECO 251 Principles of Microeconomics	3	0	3
PSY 150 General Psychology	3	0	3
<i>** MAJOR ELECTIVES Choose one (1) semester credit hour from the following:</i>			
AHR 180 HVACR Customer Relations	1	0	1
WBL 111 Work-Based Learning I	0	10	1

*This course is a component of the general education requirements needed for graduation.

NOTE: Students are required to take ACA 111 in their first semester.

AIR CONDITIONING HEATING AND REFRIGERATION TECHNOLOGY DIPLOMA (D35100)

COURSE & HOUR REQUIREMENTS

Course Number & Name	Class Hours	Lab Hours	Credit Hours
FALL SEMESTER			
ACA 111 College Student Success	1	0	1
AHR 110 Intro to Refrigeration	2	6	5
AHR 111 HVACR Electricity	2	2	3
AHR 160 Refrigerant Certification	1	0	1
*COM 110 Intro to Communication	3	0	3
Total	9	8	13
SPRING SEMESTER			
AHR 112 Heating Technology	2	4	4
AHR 113 Comfort Cooling	2	4	4
AHR 125 HVACR Electronics	2	2	3
ELC 125 Diagrams and Schematics	1	2	2
*MAT 110 Mathematical Measurement & Lit.	2	2	3
Total	9	14	16
SUMMER SEMESTER			
AHR 114 Heat Pump Technology	2	4	4
AHR 115 Refrigeration Systems	1	3	2
AHR 213 HVACR Building Code	1	2	2
AHR 263 Energy Management	1	3	2
***Major Elective	1/0	0/10	1
Total	5/6	12/22	11
TOTAL SEMESTER CREDIT HOURS FOR DIPLOMA			40
** MAJOR ELECTIVES Choose one (1) semester credit hour from the following:			
AHR 180 HVACR Customer Relations	1	0	1
WBL 111 Work-Based Learning I	0	10	1

*This course is a component of the general education requirements needed for graduation.

NOTE: Students are required to take ACA 111 in their first semester.

AIR CONDITIONING HEATING AND REFRIGERATION TECHNOLOGY CERTIFICATE (C35100)

COURSE & HOUR REQUIREMENTS

Class Title	Class Hours	Lab Hours	Credit Hours
AHR 110 Intro to Refrigeration	2	6	5
AHR 111 HVACR Electricity	2	2	3
AHR 112 Heating Technology	2	4	4
AHR 113 Comfort Cooling	2	4	4
TOTAL SEMESTER CREDIT HOURS FOR CERTIFICATE	8	16	16

NOTE: This certificate starts each fall and can be completed in 2 semesters.