AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

Uvalde Campus

Purpose

The Air Conditioning and Refrigeration program seeks to educate and provide guided learning experiences to individuals interested in entering this rapidly developing field. The goal of the program is for graduates to be employable as entry-level service technicians in residential and light commercial air conditioning, refrigeration, and heating.

Students will learn about the refrigeration cycle, tools of the trade, instrument usage and application, wiring schematic reading, electrical controls and switches, refrigerant recovery, reclaiming and recycling, installation practices, trouble shooting procedures on electrical and sealed systems plus employee/employer relations, job hunting skills, résumé building and information related to operating a small business.

Admission Requirements

Students are admitted to the Air Conditioning and Refrigeration program through the regular college admission procedures (*see Admission Regulations section*). Students will receive a one-year Certificate, two-year Certificate, and/or an Associate of Applied Science (A.A.S.) degree upon satisfactory completion of the program of study and upon making formal application for graduation (*see Curricula section).*

The Air Conditioning and Refrigeration program carries three award options, a one-year Certificate, two-year Certificate, and an A.A.S. degree. College Board policy requires all students to take the Accuplacer examination. Students pursuing the one-year Certificate do not have to pass the Accuplacer; however, those not scoring at the READ 0302 level are encouraged to enroll in the appropriate developmental course(s).

Students who wish to pursue the two-year Certificate and/or the A.A.S. degree must meet all Texas Success Initiative (TSI) requirements.

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY
ONE-YEAR CERTIFICATE

Program of Study

Fall Semester		Credit
ORIE 0100π		
Or		
COLS 0300	College Success Skills	
CETT 1402	Electricity Principles	4
HART 1407	Refrigeration Principles	4
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
	Total	12

Spring Semester		Credit
HART 1403	Air Conditioning Control Principles	4
HART 1441	Residential Air Conditioning	4
HART 2438[1]	Air Conditioning Installation and Startup	4
	Total	12
	Total Credit Hours for Certificate	24

Notes: 1 Capstone course that consolidates the student's learning experiences.
π All students are required to take ORIE 0100 or COLS 0300; however, ORIE 0100/COLS 0300 do not count toward degree requirements.

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY
TWO-YEAR CERTIFICATE

Program of Study

FIRST YEAR

Fall Semester		Credit
ORIE 0100π		
Or		
COLS 0300	College Success Skills	
CETT 1402	Electricity Principles	4
HART 1407	Refrigeration Principles	4
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
	Total	12

Spring Semester		Credit
HART 1403	Air Conditioning Control Principles	4
HART 1441	Residential Air Conditioning	4
HART 2438[1]	Air Conditioning Installation and Startup	4
	Total	12

SECOND YEAR

Fall Semester		Credit
HART 2442	Commercial Refrigeration	4
HART 1445	Gas and Electric Heating	4
HART 2436	Air-Conditioning Troubleshooting	4
	Total	12

Spring Semester		Credit
HART 2449	Heat Pumps	4
HART 2445	Residential Air Conditioning Systems Design	4
HART 2280[1]	Cooperative Education – Heating/Air Conditioning and Refrigeration Technologies/Technicians	2
	Total	10
	Total Credit Hours for Certificate	46

Notes: 1 Capstone course that consolidates the student's learning experiences.
π All students are required to take ORIE 0100 or COLS 0300; however, ORIE 0100/COLS 0300 do not count toward degree requirements.

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY
ASSOCIATE OF APPLIED SCIENCE DEGREE

	Credit
General Education Courses:	
Social & Behavioral Sciences	3
Humanities & Fine Arts	3
Natural Science & Math	3
Other	7
Total General Education Courses	16
Technical Education Courses	46
Total Credit Hours for A.A.S.	62

Program of Study

FIRST YEAR

	Fall Semester	Credit
ORIE 0100π	New Student Orientation	
or		
COLS 0300	College Success Skills	
CETT 1402	Electricity Principles	4
HART 1407	Refrigeration Principles	4
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
ELECTIVE	Humanities & Fine Arts	3
	Total	15

	Spring Semester	Credit
HART 1403	Air Conditioning Control Principles	4
HART 1441	Residential Air Conditioning	4
HART 2438	Air Conditioning Installation and Startup	4
COSC 1401	Microcomputer Applications	4
	Total	16

	Summer Session	Credit
ELECTIVE	Social and Behavioral Sciences	3
ELECTIVE	Speech Communications	3
	Total	6

SECOND YEAR

	Fall Semester	Credit
HART 2442	Commercial Refrigeration	4
HART 1445	Gas and Electric Heating	4
HART 2436	Air-Conditioning Troubleshooting	4
ELECTIVE	College Level Mathematics	3
	Total	15

	Spring Semester	Credit
HART 2449	Heat Pumps	4
HART 2445	Residential Air Conditioning Systems Design	4
HART 2280[1]	Cooperative Education – Heating/Air Conditioning and Refrigeration Technologies/Technicians	2
	Total	10
	Total Credit Hours for A.A.S.	62

Notes: 1 Capstone course that consolidates the student's learning experiences.
π All students are required to take ORIE 0100 or COLS 0300; however, ORIE 0100/COLS 0300 do not count toward degree requirements.

Materials for Class Work

Each student must have or must purchase a textbook and tools. A list of tools will be furnished to each student.

1 Tool Set (*approximate cost*)..... $600
Textbooks (*approximate cost*)..... $130