FUTURA CAREER INSTITUTE

HAIR DESIGN / BARBER

COSMETOLOGY

FULL SPECIALIST

AIR CONDITIONING REFRIGERATION TECHNICIAN

ELECTRICAL TECHNICIAN

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CATALOG

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Licensed by:

The Commission for Independent Education located at 325 W Gaines Sreet, Suite 1414, Tallahassee, Florida 32399-0400. Telephone Number 1-888-224-6684.

Accredited by:

The Council on Occupational Eduaction (COE) located at 7840 Roswell Road, Building 300, Suite 325, Atlanta, GA 30350. Toll Free Number 1-800-917-2081, and recognized by the U.S. Department of Education under Title IV program.

AIR CONDITIONING/REFRIGERATION TECHNICIAN

720 HOURS/45 Credits

(Include 180 course prep hours)

Objective

To give the student the basic skills, knowledge and experience necessary to become employable in the air conditioning and refrigeration trade at an entry level position. The training experience of students together with after graduation experience will allow the student to grow and expand in his/her prospective position.

Course Description

The school covers in the Air Conditioning and Refrigeration Program a variety of tasks and duties associated with the field of Air Conditioning and Refrigeration. The teaching methods, theories and lecture, and a supervised laboratory. Graduates of this program would qualify for the following entry level positions: Cooling Mechanic, Heating Mechanic, Refrigeration Mechanic, Energy Consultant, Heating and Cooling Service and New System Sales and Installation. The school also administers EPA Certificate Exams for Type I, II, III and universal certification.

Requirements

Must be 16 years of age and have a high school diploma, or GED.

PROGRAM INFORMATION

Completion Time

20 hours a week = 36 week. Maximum Time Frame = 54 week

Tuitionand Fees:

Tuition	$ 7900.00
Registration Fee	100.00
Books/Supplies	Included

Total	**$ 8000.00**

PROGRAM DESCRIPTION

AC001 Basic Principles of Refrigeration, Freon and Temperature-Pressure Relationships

(2 credit lecture, 3 credit lab= 80 clock hours)

At the end of this chapter the student will have learned: Law I (Cold), Law II(Heat),
Law III (Heat in vapor), basic refrigeration cycle, flow of heat, compressors, evaporators, condensers, the capillary tube, temperature pressure Chart, and using service gauges. The student will have also learned about balanced system, the thermostatic expansion valve, different types of units, commercial refrigeration (Open Type Case; Service Valves), converting refrigerant temperature to pressure, and operating pressures of various types of equipment.

AC002 Charging Window Units and Refrigerators, Servicing Commercial Equipment

(2 credit lecture, 3 credit lab= 80 clock hours)

At the end of this chapter the student will have learned condenser pressures, super heat, external equalizer line, understanding different temperatures of a system, charging the capillary tube system, making a pig tail, charging the home refrigerator/freezer, and charging the window the window unit.

The student will also have learned about commercial refrigeration diagnosis, mounting service gauges,

checking for leaks, amount of charge, the receiver tank, pumping the system down, charging rules for all systems, setting pressure controls for temperature, commercial units operating pressure chart, and troubleshooting guide.

AC003 Basic Principles of Electricity
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about electrical
knowledge, servicing home electrical (single phase), the high leg circuit, the 208-volt circuit, service voltage to homes and buildings, and electrical trouble shooting.

AC004 Electric Motors, Motor Starting Devices
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about motor classification, motor problems, single phase motors, shaded pole motors, washing machine type motors, capacitor start motors, and the hermetic compressor. The student will have also learned about run capacitors, permanent split capacitors (PSC), start capacitor, capacitor check, substituting capacitors, line starters, start devices, and service diagnosis chart.

AC005 Electrical Troubleshooting of Hermetic Compressors
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about the simplicity of hermetic compressors, manual starting of hermetic, types of relays, and homing of compressor terminals.

AC006 Air Distribution and Balance
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about the air distribution after leaving the handle, how to obtain a good air flow through a conduction system as achieving a good air return and the configuration of an air duct system.

AC007 Central System
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about condensing unit
(Air cooled), charging the central system, low- and high-pressure controls, and starting devices.

AC008 Gas and Electric Heating, Heat Pumps
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about furnace ratings, thermocouples, gas valve, the thermostat, the anticipator, pilot generator, the hearing cycle, central heating service check list and service pointers, electrical trouble shooting guide, high efficiency furnaces, the pulse furnace, induced combustion gas-fired furnace, and electric heat. The student will have also learned about computing EER and COP, the refrigeration circuit, charging with refrigerants, electrical, defrost termination by temperature and time, troubleshooting guide for the heat pump, defrost trouble shooting, two speed compressors, and electrical trouble shooting guide.

AC009 Ice Machines, Refrigerants Recovery and New Refrigerants
(2 credit lecture, 3 credit lab= 80 clock hours)
At the end of this chapter the student will have learned about types of ice, how cubes and flakes are formed, the refrigeration cycle, metering devices, leak checking and charging, system pressure, system trouble shooting, refrigeration trouble shooting guide, electrical, brand specific wiring diagrams, and electrical trouble shooting guide. The student will have also learned about categories of refrigerants, alternative refrigerants, refrigerant management options, alternate refrigerant blends, pressure temperature chart, lubricants, system components, procedures in making the retrofit, recovery units, removing liquid refrigerant, draining compressor, and cylinder types and sizes.

Books

La Biblia Dooling para el Técnico Reparador DOOLCO, INC., 4th Edición
Tecnología de Refrigeración y Aire Acondicionado 6th Edición

Requirements for Graduation

Students must complete 720 hours of theory, and lab/shop training with a minimum cumulative grade point average of a 2.0.

Requirements for Licensing

Passing test administrated by the Institution.

Diploma

After the completion of the program, the student receives a diploma providing that the final examination is approved and all requisites and financial obligations with the institution have been met.

Method of Payment

Full payment may be made in advance, at the beginning of the program, by mid-point of the program, or paid on a monthly basis arranged with the School office.

School Calendar for Air Conditioning/Refrigeration Technician 2021-2022

Start Date	Graduation Date
12-20-2021	08-29-2022
01-24-2022	10-03-2022
02-22-2022	11-01-2022
03-21-2022	11-28-2022
04-18-2022	12-26-2022
05-16-2022	01-23-2023
06-13-2022	02-20-2023
07-11-2022	03-20-2023
08-08-2022	04-17-2023
09-06-2022	05-16-2023
10-03-2022	06-12-2023
10-31-2022	07-10-2023
11-28-2022	08-07-2023
12-26-2022	09-14-2023