

# HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION (HVACR), CERTIFICATE OF ACHIEVEMENT

**Banner Code:** 1\_CT\_HVAC

**Control Number:** 19545

**Financial Aid Eligible**

The Heating, Ventilation and Air Conditioning (HVACR) option prepares students for employment as heating, ventilating and air conditioning technicians. Students will be trained to install, service and maintain air conditioning/refrigeration equipment in buildings. The program provides a background for more advanced studies in the design and installation of computerized building automation systems.

Refrigeration relates to the cooling of air or liquids, thus providing lower temperatures to preserve food, cool beverages, make ice, and for many other applications. Air conditioning includes space cooling, heating, humidification, dehumidification, air filtration, and ventilation to condition the air and improve air quality. The field of HVACR Technology is vital to our health and security, from the cryogenic (ultra-low temperatures) scientific field to the preservation of our food products to the air conditioning of hospitals and institutions.

A math competency level equivalent to Tech A040 is strongly recommended or satisfactory score on math competency examination.

## Program Outcome

Prepare students for entry-level employment as an HVACR Technician and for industry certifications.

Review Certificate Requirements (<https://catalog.cccd.edu/orange-coast/graduation-requirements/certificates/#achievementtext>).

Course	Title	Units
<b>Required Courses</b>		
CHT A100	Computer Use in Technology	3
HVAC A100	Air Conditioning and Refrigeration Principles	3
HVAC A101	Basic Electrical for HVAC-R	3
HVAC A102	Refrigeration Service	3
HVAC A103	Air Conditioning Service	3
HVAC A105	Air Conditioning and Refrigeration Controls	3
HVAC A110	Pneumatic Controls	3
HVAC A140	Building Automation	3
<i>Select six units of the following:</i>		6
HVAC A104	Air Balance	
HVAC A106	Non-Residential Applications for HVAC	
HVAC A111	Ice Machine Service & Repair	
<b>Total Units</b>		<b>30</b>

## Program Sequence

These sequences at Orange Coast College are curriculum maps for students to finish all requirements for the certificate. There may be advisories, prerequisites, or time requirements that students need to consider before following these maps. **Students are advised to meet with an Orange Coast College Counselor for alternate sequencing.**

Some courses in this program may be offered once per academic year.

Course	Title	Units
<b>Year 1</b>		
<b>Semester 1</b>		
HVAC A100	Air Conditioning and Refrigeration Principles	3
HVAC A101	Basic Electrical for HVAC-R	3
CHT A100	Computer Use in Technology	3
<b>Units</b>		<b>9</b>
<b>Semester 2</b>		
HVAC A140	Building Automation	3
HVAC A104 or HVAC A106 or HVAC A111	Air Balance or Non-Residential Applications for HVAC or Ice Machine Service & Repair	3
HVAC A102	Refrigeration Service	3
<b>Units</b>		<b>9</b>
<b>Year 2</b>		
<b>Semester 1</b>		
HVAC A110	Pneumatic Controls	3
CHOOSE ONE THAT HAS NOT BEEN TAKEN		3
HVAC A104	Air Balance	
HVAC A106	Non-Residential Applications for HVAC	
HVAC A111	Ice Machine Service & Repair	
HVAC A105	Air Conditioning and Refrigeration Controls	3
<b>Units</b>		<b>9</b>
<b>Semester 2</b>		
HVAC A103	Air Conditioning Service	3
<b>Units</b>		<b>3</b>
<b>Total Units</b>		<b>30</b>