

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION, CERTIFICATE OF ACHIEVEMENT

Financial Aid Eligible
Banner Code: 1_CT_HVAC
Control Number: 19545

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

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

Certificate Requirements

Orange Coast College offers two types of certificate awards in career programs designed to prepare the graduate to enter a particular field of employment. At least 3 units in an advanced course from the certificate must be completed at OCC.

1. **Certificate of Achievement** - 8 units or more in a state-approved program. Certificates of Achievement are not automatically awarded. A petition must be filed in Enrollment Services or online at the beginning of the semester in which the student will be completing his or her final requirements. The petitioning periods are listed in the Graduation Requirements (<https://catalog.cccd.edu/orange-coast/graduation-requirements/>) section of this catalog.
2. **Certificate of Specialization** - 16 units or less in a locally approved program. Certificates of Specialization are not automatically awarded, not printed on official academic transcripts, and there is no acknowledgment of completion given at graduation. Please contact the division for details regarding the submission of petitions as procedures for each division vary. Most division offices prefer that students complete all of the required courses and then provide a copy of the transcript while some divisions allow petitions for Certificates of Specialization before finishing.

Minimum Grade Requirement

In order to be awarded a certificate, students are required to obtain a grade of "C" or better in all program-required courses. Grades of "CR" or

"P" will be accepted whereas "CR" or "P" meets the equivalency of a "C" or better. A list of certificate programs can be found in the Programs A-Z (<https://catalog.cccd.edu/orange-coast/programs-study/>) section of this catalog. Check with a counselor to determine the requirements for completion.

Course	Title	Units
Required Courses		
Select one of the following:		3
CHT A100	Computer Use in Technology	
CIS A100	Introduction to Computer Applications	
CIS A111	Introduction to Computer Information Systems	
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
Select six units of the following:		6
HVAC A104	Air Balance	
HVAC A106	Non-Residential Applications for HVAC	
HVAC A111	Ice Machine Service & Repair	
Total Units		30