

GOALS AND OBJECTIVES

The **Air Conditioning & Refrigeration program** is designed to be a bridge between Engineering and Service Technology. It will provide students with technical hands-on skills to support engineering applications. Graduates of the program will be at the leading edge of the application of new engineering solutions to the industry.

CERTIFICATE

See the Cypress College Catalog for additional certificates.

Air Conditioning & Refrigeration

To earn the certificate, complete the required courses as listed with a minimum grade of "C." At least 50% of all coursework must be completed at Cypress College.

DEGREE

Associate in Science Degree in Air Conditioning & Refrigeration

To earn an Associate's Degree, students must complete:

- (1) All 38.5-39 units of Air Conditioning & Refrigeration course requirements for the Certificate in Air Conditioning & Refrigeration with a minimum grade of "C" or better;
- (2) 25 units of (Native) General Education requirements and any elective courses to complete the minimum of 60 units; and,
- (3) have a minimum GPA of 2.0. At least 50% of all major course work must be completed at Cypress College.

For information on specific university requirements, please consult with your counselor, or visit the Transfer Center.

CERTIFICATE

Air Conditioning & Refrigeration Certificate = 40.5-41 units

Program Code: 1C31173

Required courses are listed in suggested sequence:

	Units
_____ AC/R 100 C Principles of Thermodynamics & Heat Transfer (F)	3
_____ AC/R 110 C Air Conditioning I (F)	3
_____ AC/R 120 C Piping Practice, Tools and Safety (F)	2
_____ AC/R 137 C Blueprint Reading and Dimension Analysis (F)	2
_____ AC/R 036 C Refrigerants, Charging and Recovery (S)	1
_____ AC/R 055 C Technician Customer Relations (S)	2
_____ AC/R 105 C Electricity for A/C and Refrigeration I (S)	3
_____ AC/R 115 C Gas Heating and Carbon Monoxide (S)	2
_____ AC/R 125 C Boilers and Hydronic Heating (S)	2
_____ AC/R 106 C Electricity for AC and Refrigeration II (F)	3
_____ AC/R 210 C Commercial Refrigeration (F)	3
_____ AC/R 220 C A/C Controls and Energy Management (F)	2
_____ AC/R 230 C Heat Pumps (F)	2
_____ AC/R 035 C Building Commissioning (S)	2
_____ AC/R 145 C Load Calculations for Heating and Cooling (S)	2
_____ AC/R 205 C Commercial Air Conditioning (S)	3
_____ AC/R 215 C Codes and Estimating (S)	3
_____ AC/R 050 C HVAC Special Projects (S)	0.5-1

Total Units Required


40.5 - 41

DEGREE

A.S. Degree Air Conditioning and Refrigeration = 66 units

Program Code: 1S03774

To earn an Associate in Science Degree, complete the entire program and the local General Education Graduation Requirements outlined in the Cypress College Catalog (minimum 25 units plus cultural diversity and reading proficiency requirements).

 **Key Tips:** You may opt to "double major" by applying some of these courses to other AC/R Degree/Certificate Programs. Remember to apply for certificates/degrees/graduation at the beginning of your last semester.

Student Educational Planner

Air Conditioning & Refrigeration Certificate & Degree

■ Air Conditioning & Refrigeration

■ A.S. Degree

► Fall 20__						► Spring 20__						► Summer 20__					
Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units
AC/R 100 C	✓		✓		3	AC/R 036 C	✓				1						
AC/R 110 C	✓		✓		3	AC/R 055 C	✓				2						
AC/R 120 C	✓		✓		2	AC/R 105 C	✓		✓		3						
AC/R 137 C	✓		✓		2	AC/R 115 C	✓		✓		2						
A1 Written Comn (ENGL 100 C)	✓	✓	✓	✓	4	AC/R 125 C	✓		✓		3						
						B2 Mathematics	✓	✓			4						
Total					14	Total					15	Total					

► Fall 20__						► Spring 20__						► Summer 20__					
Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units
AC/R 106 C	✓		✓		3	AC/R 035 C	✓				2						
AC/R 210 C	✓		✓		3	AC/R 145 C	✓		✓		2						
AC/R 220 C	✓		✓		2	AC/R 205 C	✓		✓		3						
AC/R 230 C	✓		✓		2	AC/R 215 C	✓		✓		3						
D Social Science	✓	✓	✓	✓	3	AC/R 050 C	✓				1						
Total					13	Total					11	Total					

► Fall 20__						► Spring 20__						► Summer 20__					
Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units	Course	C/D	CGE	CSU	UC	Units
A2 Analytical Thkg (ENGL 103 C)	✓	✓	✓	✓	4	D Social Science	✓	✓	✓	✓	3						
B1 Natural Science	✓	✓	✓	✓	3	E Physical Activity	✓	✓	✓		1						
C1 Arts	✓	✓	✓	✓	3	Cultural Diversity		*			3						
C2 Humanities	✓	✓	✓	✓	3	Reading Proficiency		*			3						
Total					13	Total					10	Total					

*C/D: Certificate/Degree course requirements

CGE: Cypress College (Native) General Education Requirements for Associate Degree

UC: University of California & California State University (Transferable)

CSU: California State University General Education Breadth requirements

*: Can be used in others areas. See counselor or catalog for details.

For more information, go to Transfer Center at: www.cypresscollege.edu/services/transfer-center/

Please note: This student education plan (SEP) is offered as a suggestion only. Students may modify it by taking more or fewer classes as needed. Students wishing to exceed 19 units per semester will need to meet with a counselor. Students wishing to complete an AS Degree and/or transfer should meet with a counselor to modify their course plan to include general education courses.

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For more information: www.CypressCollege.edu | (714) 484-7004 | Cypress, CA 90630