

# Air Conditioning and Refrigeration Certificate

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NOTICE(s): For the certificate in Air Conditioning and Refrigeration, the student must complete a minimum of 46 credit hours – 40 hours in technical and 6 hour in general education courses – all of which must be approved by the advisor. Required courses may vary to provide options and to meet student needs. Admission Requirement: High school diploma or GED.

The courses in this program of study may not be offered every semester. It is important to consult with your advisor to determine course schedules to stay on track to graduate.

## Area I – Written Composition

Item #	Title	Hours	Grade	Term Completed
ENG 101	English Composition I	3		
	Sub-Total Credits	3		

## Area III – Natural Sciences and Mathematics

Item #	Title	Hours	Grade	Term Completed
	MTH 100: Intermediate College Algebra	3		
	OR numerically higher			
	Sub-Total Credits	3		

## Area V - Required Technical Courses

Item #	Title	Hours	Grade	Term Completed
ACR 111	Principles of Refrigeration	3		
ACR 112	HVACR Service Procedures	3		
ACR 113	Refrigeration Piping Practices	3		
ACR 121	Principles of Electricity for HVACR	3		
ACR 122	HVACR Electric Circuits	3		
ACR 123	HVAC/R Electrical Components	3		
ORI 101	Orientation to College	1		
	Sub-Total Credits	19		

# Additional Coursework

Choose 21 credit hours from the list below:

Item #	Title	Hours	Grade	Term Completed
ACR 119	Fundamentals of Gas Heating Systems	3		
ACR 120	Fundamentals of Electric Heating Systems	3		
ACR 125	Fundamentals of Gas and Electrical Heating Systems	6		
ACR 126	Commercial Heating Systems	3		
ACR 127	HVACR Electric Motors	3		
ACR 128	Heat Load Calculations	3		
ACR 130	Computer Assisted HVAC Troubleshooting	1		
ACR 132	Residential Air Conditioning	3		
ACR 133	Domestic Refrigeration	3		
ACR 134	Ice Machines	3		
ACR 135	Mechanical/Gas/Safety Codes	3		
ACR 138	Customer Relation in HVAC	3		
ACR 144	Basic Drawing and Blueprint Reading in HVAC	3		
ACR 147	Refrigerant Transition and Recovery Theory	3		
ACR 148	Heat Pump Systems I	3		
ACR 149	Heat Pump Systems II	3		
ACR 150	Basic Sheet Metal Processes	6		
ACR 151	Duct Design and Fabrication	6		
ACR 152	Heat Pump Systems	6		
ACR 181	Special Topics in ACR I	3		
ACR 182	Special Topics in ACR II	3		
ACR 183	Special Topics in ACR	1		
ACR 184	Special Topics In ACR	1		
ACR 185	Special Topics in ACR	2		
ACR 186	Special Topics in ACR	2		
ACR 192	HVAC Apprenticeship/Internship	3		
ACR 193	Co-Op	1		
ACR 194	Co-Op	2		
ACR 195	Co-Op	3		
ACR 200	Review for Contractors Exam	3		
ACR 202	Special Refrigeration Systems	3		
ACR 203	Commercial Refrigeration	3		
ACR 205	System Sizing and Air Distribution	3		
ACR 209	Commercial Air Conditioning Systems	3		
ACR 210	Troubleshooting HVACR Systems	3		
CIS 146	Microcomputer Applications	3		

	INT 101 or EET 103	3
	INT 103 or EET 104	3
	MDT 105 or DDT 104	3
SPH 106	Fundamentals of Oral Communication	3
	Sub-Total Credits	121
	<b>Total Credits</b>	<b>46</b>