

AIR CONDITIONING/REFRIGERATION (ACR)

(Wallace Campus and Ventress Correctional Facility)

This program provides training in which students gain the skills, knowledge, and experience for employment in Heating Ventilation, Air Conditioning, and Refrigeration (HVAC/R) occupations.

ACR 205	System Sizing and Air Distribution	3
ACR 209	Commercial Air Conditioning Systems	3
ACR 210	Troubleshooting HVAC/R Systems	3
Total Field of Concentration Credits		45
Total Credits for Degree		68

The student will acquire techniques and skills necessary to install, maintain, repair, or replace HVAC/R equipment. The student will have the opportunity to learn various phases of the fundamental principles of controls and electrical systems associated with HVAC/R. Courses focus on residential and light commercial HVAC/R systems.

Students who complete all courses listed in the curriculum will be awarded an associate in applied science degree in Air Conditioning/Refrigeration. Students completing all Air Conditioning courses, CIS 146, ENG 101, MTH 116, and SPH 106 or 107 will be awarded a program certificate. Admission is conditional and depends on the student's ability to perform the essential functions identified for this program. Reasonable accommodations are considered.

**Air Conditioning/Refrigeration
Associate in Applied Science Degree
Suggested Course Sequence**

FIRST SEMESTER	SECOND SEMESTER	THIRD SEMESTER
ACR 111	ACR 119	ACR 148
ACR 112	ACR 120	ACR 149
ACR 132	ACR 205	ACR 203
CIS 146	ACR 209	ACR 210
ORI 101 or 105	ENG 101	ORI 104
	MTH 116	PSY 200
	Humanities/Fine Arts Elective	SPH 106 or 107

FOURTH SEMESTER

ACR 121
ACR 122
ACR 123
ACR 127
Science/Computer/Math Elective

DEGREE CURRICULUM

Courses	Credit Hours
Area I: Written and Oral Communications	6
ENG 101 English Composition I	3
SPH 106 Fundamentals of Oral Communication OR	
SPH 107 Fundamentals of Public Speaking	3
Area II: Humanities and Fine Arts	3
Humanities/Fine Arts Elective	3
Area III: Natural Sciences, Mathematics, and Computer Science	9
CIS 146 Microcomputer Applications	3
MTH 116 Mathematical Applications	3
Science/Computer Science/Math Elective	3
Area IV: History, Social, and Behavioral Sciences	3
PSY 200 General Psychology	3
Area V: Career and Technical Courses	47
Required Orientation Courses	
ORI 101 Orientation to College OR	
ORI 104 WorkKeys® Assessment and Advisement	1
ORI 105 Orientation and Student Success	1-3
Required Field of Concentration Courses	
ACR 111 Principles of Refrigeration	3
ACR 112 HVAC/R Service Procedures	3
ACR 113 Refrigeration Piping Practices	3
ACR 119 Fundamentals of Gas Heating Systems	3
ACR 121 Principles of Electricity for HVAC/R	3
ACR 122 HVAC/R Electrical Circuits	3
ACR 123 HVAC/R Electrical Components	3
ACR 127 HVAC/R Electric Motors	3
ACR 132 Residential Air Conditioning	3
ACR 148 Heat Pump Systems I	3
ACR 149 Heat Pump Systems II	3
ACR 203 Commercial Refrigeration	3

**SHORT CERTIFICATE CURRICULUM
(Ventress Correctional Facility)**

Course	Credit Hours
Area V: Career and Technical Courses	
Core Air Conditioning Course Requirements	
ACR 111 Principles of Refrigeration	3
ACR 113 Refrigeration Piping Practices	3
ACR 121 Principles of Electricity for HVAC/R	3
ACR 147 Refrigeration, Transition and Recovery Theory	3
Total Core Technical Credits	12

After completing the Core Technical Course Requirements, students may choose from the following concentrations:

ELECTRICAL CONCENTRATION	
ACR 122 HVAC/R Electrical Circuits	3
ACR 123 HVAC/R Electrical Components	3
ACR 127 HVAC/R Electric Motors	3
ACR 210 Troubleshooting HVAC/R Systems	3
Total Concentration Credits	12
Total Credits for Short Certificate	24

HEATING CONCENTRATION	
ACR 119 Fundamentals of Gas Heating Systems	3
ACR 120 Fundamentals of Electric Heating Systems	3
ACR 148 Heat Pump Systems I	3
ACR 149 Heat Pump Systems II	3
Total Concentration Credits	12
Total Credits for Short Certificate	24

*Air Conditioning/Refrigeration
Certificate
Suggested Course Sequence*

<i>FIRST SEMESTER</i>	<i>SECOND SEMESTER</i>	<i>THIRD SEMESTER</i>
<i>ACR 111</i>	<i>ACR 121</i>	<i>ACR 119</i>
<i>ACR 113</i>	<i>ACR 122</i>	<i>ACR 120</i>
<i>ACR 132</i>	<i>ACR 123</i>	<i>ACR 148</i>
<i>ACR 133</i>	<i>ACR 127</i>	<i>ACR 149</i>
<i>MAH 101</i>	<i>COM 103</i>	

FOURTH SEMESTER

<i>ACR 134</i>
<i>ACR 147</i>
<i>ACR 209</i>
<i>ACR 210</i>

**SHORT CERTIFICATE CURRICULUM
(Wallace Campus and Ventress Correctional Facility)**

<i>Courses</i>		<i>Credit Hours</i>
Area V:	Required Field of Concentration Courses	15
ACR 111	Principles of Refrigeration	3
ACR 113	Refrigeration Piping Practices	3
ACR 121	Principles of Electricity for HVAC/R	3
ACR 122	HVAC/R Electrical Circuits	3
ACR 123	HVAC/R Electrical Components	3
	Three electives from ACR courses	9
	Total Credits for Short Certificate	24