

## Heating, Ventilation, Air Conditioning, and Refrigeration Technology - Stackable Credential Alignment

HVAC Specialized Diploma		
Course #	First Semester	Credits
COLS101	College Success	1
<b>Certificate/AAS ONLY Course Addition -----&gt;&gt;&gt;</b>		
ELTC 101	Electrical Fundamentals	3
EMEC 114	Mechanical Skills for the Trades	2
HVAC 101	Fundamentals of HVAC/R I	4
MATH 103	Applications in Mathematics	3
OSAH 100	Industry Outreach Safety Education	<u>1</u>
		14
<b>Second Semester</b>		
CMGT 104	Construction Print Reading	3
ELTC 107	Wiring I	3
<b>Certificate/AAS ONLY Course Addition -----&gt;&gt;&gt;</b>		
HVAC 102	Fundamentals of HVAC/R II	3
HVAC 124	Heating: Gas, Oil, Solar Thermal. . .	4
HVAC 140	Heat Pump Systems	<u>2</u>
		<u>15</u>
	<b>Total Credits</b>	<b>29</b>

**Bold courses carry through Cert. and AAS programs**

*Italic courses must complete to achieve Cert or AAS*

HVAC/R Certificate		
Course #	First Semester	Credits
COLS101	College Success	1
<i>CISC 101</i>	<i>Intro to Information Technology</i>	3
EMEC 101	Electrical Fundamentals	3
EMEC 114	Mechanical Skills for the Trades	2
HVAC 101	Fundamentals of HVAC/R I	4
MATH 103	Applications in Mathematics	3
OSAH 100	Industry Outreach Safety Education	<u>1</u>
		17
<b>Second Semester</b>		
CMGT 104	Construction Print Reading	3
ELTC 107	Wiring I	3
<i>ENGL 101</i>	<i>English I</i>	3
HVAC 102	Fundamentals of HVAC/R II	3
HVAC 124	Heating: Gas, Oil, Solar Thermal. . .	4
HVAC 140	Heat Pump Systems	<u>2</u>
		18
<b>Third and Fourth Semesters (Sequence varies)</b>		
ELTC 135	Electrical Motors and Controls	4
HVAC 204	Refrigeration Troubleshooting	3
HVAC 250	Airflow and Distribution	3
-----	Technical Electives **	<u>6/8</u>
		<u>16-18</u>
	<b>Total Credits</b>	<b>51-53</b>

HVAC/R Associates in Applied Science (AAS)		
Course #	First Semester	Credits
COLS101	College Success	1
<i>CISC 101</i>	<i>Intro to Information Technology</i>	3
EMEC 101	Electrical Fundamentals	3
EMEC 114	Mechanical Skills for the Trades	2
HVAC 101	Fundamentals of HVAC/R I	4
MATH 103	Applications in Mathematics	3
OSAH 100	Industry Outreach Safety Education	<u>1</u>
		17
<b>Second Semester</b>		
CMGT 104	Construction Print Reading	3
ELTC 107	Wiring I	3
<i>ENGL 101</i>	<i>English I</i>	3
HVAC 102	Fundamentals of HVAC/R II	3
HVAC 124	Heating: Gas, Oil, Solar Thermal. . .	4
HVAC 140	Heat Pump Systems	<u>2</u>
		18
<b>Third Semester</b>		
<i>CMTH 102</i>	<i>Intro to Communication</i>	3
<b>EMEC 135</b>	<b>Electrical Motors and Controls</b>	<b>4</b>
<i>ENGL 151T</i>	<i>English II +</i>	3
<i>PHYS 152</i>	<i>Physical Science II</i>	3
-----	<b>Technical Elective ++</b>	<u>3</u>
		16
<b>Fourth Semester</b>		
<b>HVAC 204</b>	<b>Refrigeration Troubleshooting</b>	<b>3</b>
<b>HVAC 250</b>	<b>Airflow and Distribution</b>	<b>3</b>
-----	<i>General Education Elective</i>	3
-----	<i>General Education Elective</i>	3
-----	<b>Elective (Cert. Tech applies)</b>	<u>3</u>
		<u>17</u>
	<b>Total Credits</b>	<b>66</b>

\*\*Tech Elctvs: Any CADM, EMEC, ELEC, ELTC, ENGG, CHEM, CISC, or WELD except CADM 100, CADM117, EMEC 115, ENGG 100, OR ENGG117

**\*\*\*\*SCHEDULING WITH HVAC ADVISOR IS CRITICAL FOR SUCCESS**

**E-mail: [dphilipps@northampton.edu](mailto:dphilipps@northampton.edu) Office: 610-332-6258**