



**ASSOCIATE OF APPLIED SCIENCE**  
**HEATING, VENTILATION, AIR CONDITIONING,  
 AND REFRIGERATION TECHNOLOGY**

*The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.*

**2023-24 Catalog**  
Effective Summer 2023

**4500**

*Business, Engineering, and Information Technologies Division*

*Industrial Technology Department*

<b>TECHNICAL Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre- and Co-Requisites</b>	<b>Completed Sem./Year</b>
HVC121	HVAC Principles I	3		
HVC122	HVAC Principles II	3	Pre-Co-HVC121	
HVC125	Sheet Metal Layout and Fabrication	4		
HVC222	HVAC Design and Application	3	HVC122	
HVC223	HVAC System Operation and Troubleshooting – Heating	3	HVC122	
HVC224	HVAC System Operation and Troubleshooting – Cooling	3	HVC122	
HVC227	HVAC Field Installation Techniques and Procedures	4	Pre-Co-HVC122	
HVC234	HVAC Electrical Systems and Applications <sup>^</sup>	3		
<b>TECHNICAL ELECTIVES: 6 credit hours minimum</b>				
HVC232	Hydronic Applications and Design	3	HVC122	
HVC235	Refrigeration	3	HVC122	
HVC237	HVAC Commercial Controls	3	HVC122	
HVC238	Chiller Operations	3	HVC122	
<b>Total</b>		<b>32</b>		
<b>NON-TECH Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre- and Co-Requisites</b>	<b>Completed Sem./Year</b>
SSC101	Student Success Seminar <sup>^^</sup>	1	<i>Take first semester</i>	
AIT101	Basic Machines <sup>^^</sup>	2	<i>Take first semester</i>	
ITD122	Computer Applications for Professionals <sup>^</sup>	3	ITD100 <b>or</b> Proficiency	
PHY101	Principles of Physics (lab) <sup>^</sup>	4	(MTH024 <b>or</b> MTH025 <b>or</b> Proficiency) <b>or</b> MTH105 <b>or</b> MTH107 <b>and</b> (IDS102 <b>or</b> Proficiency)	
MTH107 <b>or</b> MTH125	Industrial Math <sup>^</sup> <b>or</b> College Algebra <sup>^</sup> Ω	3 <b>or</b> 4	<i>Check for prerequisites</i>	
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency	
ENG221	Technical Report Writing	3	ENG124	
COM121 <b>or</b> COM123	Effective Speaking <b>or</b> Small Group Communication <sup>^</sup>	3 <b>or</b> 3	None <b>or</b> IDS102 <b>or</b> Proficiency	
	<i>Select one (1) Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective<sup>3</sup></i>	3	<i>Check for prerequisites</i>	
<b>NON-TECH ELECTIVES: 7 credit hours minimum</b>				
CET121	Building Materials and Construction Methods	3		
DET125	Basic AutoCAD	3		
ENV231	OSHA 30-Hour General Industry	2		
MST121	Blueprint Reading	2		
MST126	Pipefitting Principles and Applications	3		
<b>Total</b>		<b>32-33</b>		
<b>TOTAL CREDIT HOURS</b>		<b>64-65</b>		

See next page for footnote specifics

## FULL-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	Take first semester
AIT101	Basic Machines^^	2	Take first semester
MTH107	Industrial Math^	3	
<b>or</b>	<b>or</b>	<b>or</b>	Check for prerequisites
MTH125	College Algebra^ Ω	4	
HVC121	HVAC Principles I	3	
HVC122	HVAC Principles II	3	Pre-Co-HVC121
HVC125	Sheet Metal Layout and Fabrication	4	
		<b>16-17</b>	
<u>Second Semester</u>			
ENG124	College Composition^	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
ITD122	Computer Applications for Professionals^	3	ITD100 <b>or</b> Proficiency
HVC227	HVAC Field Installation Techniques and Procedures	4	Pre-Co-HVC122
HVC234	HVAC Electrical Systems and Applications^	3	
<i>Non-Technical Elective</i> <sup>2</sup>		2	Check for prerequisites
		<b>15</b>	
<u>Third Semester</u>			
COM121	Effective Speaking	3	
<b>or</b>	<b>or</b>	<b>or</b>	
COM123	Small Group Communication^	3	IDS102 <b>or</b> Proficiency
HVC222	HVAC Design and Application	3	HVC122
HVC223	HVAC System Operation and Troubleshooting – Heating	3	HVC122
HVC224	HVAC System Operation and Troubleshooting – Cooling	3	HVC122
<i>Non-Technical Elective</i> <sup>2</sup>		2	Check for prerequisites
<i>Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective</i> <sup>3</sup>		3	Check for prerequisites
		<b>17</b>	
<u>Fourth Semester</u>			
ENG221	Technical Report Writing	3	ENG124
PHY101	Principles of Physics (lab)^	4	(MTH024 <b>or</b> MTH025 <b>or</b> Proficiency) <b>or</b> MTH105 <b>or</b> MTH107 <b>and</b> (IDS102 <b>or</b> Proficiency)
<i>Non-Technical Elective</i> <sup>2</sup>		3	Check for prerequisites
<i>Technical Electives</i> <sup>1</sup>		6	Check for prerequisites
		<b>16</b>	
<b>TOTAL CREDITS</b>		<b>64-65</b>	

^Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

ΩMTH125 should only be taken by students planning to transfer to a four-year institution

<sup>1</sup>Technical Electives: HVC232, HVC235, HVC237, HVC238

<sup>2</sup>Non-technical Electives: CET121, DET125, ENV231, MST121, MST126

<sup>3</sup>Social & Behavioral Sciences or Arts & Humanities electives: BUS122 (recommended), BUS221, BUS222, ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, HIS221, HIS222, PHL122 (recommended), PSC121, PSY121, PSY123, PSY124, PSY220, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225