



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.

2024-25 Catalog

Effective Summer 2024

4500

Business, Engineering, and Information Technologies Division

Industrial Technology Department

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
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 [^]	3		
TECHNICAL ELECTIVES: 6 credit hours minimum				
HVC232	Hydronic Applications and Design	3	HVC122	
HVC235	Refrigeration	3	HVC122	
HVC237	HVAC Commercial Controls	3	HVC122	
HVC238	Chiller Operations	3	HVC122	
Total		32		
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar ^{^^}	1	Take first semester	
AIT101	Basic Machines ^{^^}	2	Take first semester	
ITD122	Computer Applications for Professionals [^]	3	ITD100 or Proficiency	
PHY101	Principles of Physics (lab) [^]	4	(MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency)	
MTH107 or MTH125	Industrial Math [^] or College Algebra [^] Ω	3 or 4	Check for prerequisites	
ENG124	College Composition [^]	3	Co-ENG024 or Co-ENG011 or Proficiency	
ENG221	Technical Report Writing	3	ENG124	
COM121 or COM123	Effective Speaking or Small Group Communication [^]	3 or 3	IDS102 or Proficiency	
	Select one (1) Social & Behavioral Sciences or Arts & Humanities Elective ³	3	Check for prerequisites	
NON-TECH ELECTIVES: 7 credit hours minimum				
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		
Total		32-33		
TOTAL CREDIT HOURS		64-65		

See next page for footnote specifics

Students completing this degree may be eligible to also receive a Heating, Ventilation, Air Conditioning, and Refrigeration Technology – HVACR Technician (Level I) Career Enhancement Certificate (4505), Heating, Ventilation, Air Conditioning, and Refrigeration Technology – HVACR Technician (Level II) Career Enhancement Certificate (4506), and a Heating, Ventilation, Air Conditioning, and Refrigeration Technology One-Year Certificate (4501).

PART-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 part-time associate degree students who plan to finish in eight semesters.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	<i>Take first semester</i>
AIT101	Basic Machines^^	2	<i>Take first semester</i>
HVC121	HVAC Principles I	3	
HVC122	HVAC Principles II	<u>3</u>	Pre-Co-HVC121
		9	
<u>Second Semester</u>			
ENG124	College Composition^	3	Co-ENG024 or Co-ENG011 or Proficiency
MTH107	Industrial Math^	3	
or	or	or	<i>Check for prerequisites</i>
MTH125	College Algebra^ Ω	4	
<i>Non-Technical Elective</i> ²		<u>2</u>	<i>Check for prerequisites</i>
		8-9	
<u>Third Semester</u>			
COM121	Effective Speaking	3	
or	or	or	
COM123	Small Group Communication^	3	IDS102 or Proficiency
HVC227	HVAC Field Installation Techniques and Procedures	4	Pre-Co-HVC122
ITD122	Computer Applications for Professionals^	<u>3</u>	ITD100 or Proficiency
		10	
<u>Fourth Semester</u>			
HVC125	Sheet Metal Layout and Fabrication	4	
HVC234	HVAC Electrical Systems and Applications^	<u>3</u>	
		7	
<u>Fifth Semester</u>			
HVC223	HVAC System Operation and Troubleshooting – Heating	3	HVC122
HVC224	HVAC System Operation and Troubleshooting – Cooling	3	HVC122
<i>Social & Behavioral Sciences or Arts & Humanities Elective</i> ³		<u>3</u>	<i>Check for prerequisites</i>
		9	
<u>Sixth Semester</u>			
HVC222	HVAC Design and Application	3	HVC122
<i>Non-Technical Elective</i> ²		2	<i>Check for prerequisites</i>
<i>Technical Elective</i> ¹		<u>3</u>	<i>Check for prerequisites</i>
		8	
<u>Seventh Semester</u>			
ENG221	Technical Report Writing	3	ENG124
<i>Non-Technical Elective</i> ²		<u>3</u>	<i>Check for prerequisites</i>
		6	
<u>Eighth Semester</u>			
PHY101	Principles of Physics (lab)^	4	(MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency)
<i>Technical Elective</i> ¹		<u>3</u>	<i>Check for prerequisites</i>
		7	
	TOTAL CREDITS	64-65	

^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

¹Technical Electives: HVC232, HVC235, HVC237, HVC238

²Non-technical Electives: CET121, DET125, ENV231, MST121, MST126

³Social & 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