

## **HVAC Technology Curriculum**

#### Contact Us

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### **Program Overview**

One of the fastest-growing service occupations, Heating, Ventilation and Air Conditioning has seen major changes over the past years as a result of the national emphasis on fuel conservation and environmental concerns.

Every private residence, business, industry and agency needs the skill of technicians trained in the installation, maintenance and repair of air conditioning, refrigeration and heating systems.

Students are trained to diagnose and repair malfunctions; size, fabricate and install air duct systems; and estimate cooling and heating loads for selection of the most efficient systems for a given building. Practical training in a well-equipped shop and outside installation of service projects gives students on-the-job experience before they graduate. EPA technician certification is taught and the test is offered to all curriculum students.

#### PROGRAM REQUIREMENTS

# A.A.S., Major in Heating, Ventilation, and Air Conditioning Technology

Day Program

FIRST SI	EMESTER	CREDIT HOURS
ACR 101	Fundamentals of Refrigeratio	n5.0
ACR 105	Tools and Service Techniques	s I1.0
ACR 106	Basic Electricity for HVAC/R	4.0
CPT 101	Introduction to Computers	3.0
MAT 170	Algebra, Geometry and Trigo	nometry I 3.0
	or MAT 110 College Algebra	
SECOND SEMESTER		
ACR 109	Tools and Service Techniques	s II2.0
ACR 131	Commercial Refrigeration	4.0
ACR 140	Automatic Controls	3.0
MAT 171	Algebra, Geometry and Trigo	nometry II 3.0
	or MAT 111 College Trigonom	etry
ENG 165	Professional Communications	s3.0

or ENG 101 English Composition I

SUMME	R TERM CREDIT HOURS
ACR 107	Wiring Diagrams
ACR 130	Domestic Refrigeration4.0
ACR 150	Basic Sheet Metal2.0
ACR 160	Service Customer Relations
THIRD S	SEMESTER
ACR 110	Heating Fundamentals4.0
ACR 122	Principles of Air Conditioning5.0
ACR 210	Heat Pumps4.0
	Elective Behavioral/Social Science3.0
FOURTH	H SEMESTER
ACR 223	Testing and Balancing
ACR 224	Codes and Ordinances
ACR 231	Advanced Refrigeration4.0
	Elective Humanities/Fine Arts
	TOTAL CREDIT HOURS: 70.0

#### **Evening Program**

FIRST SI	EMESTER	<b>CREDIT HOURS</b>
ACR 101	Fundamentals of Refrigeration	on5.0
ACR 105	Tools and Service Technique	es I1.0
ACR 106	Basic Electricity for HVAC/	R 4.0
CPT 101	Introduction to Computers .	3.0
SECOND	SEMESTER	
ACR 109	Tools and Service Technique	es II 2.0
ACR 131	Commercial Refrigeration	4.0
ACR 140	Automatic Controls	3.0
MAT 170	Algebra, Geometry and Trigo	onometry I 3.0
	or MAT 110 College Algebra	
SUMME	R TERM	
ACR 107	Wiring Diagrams	2.0
ACR 150	Basic Sheet Metal	2.0
ACR 160	Service Customer Relations	3.0
ENG 165	Professional Communication	ıs3.0
	or ENG 101 English Composi	tion I

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### Heating Fundamentals Certificate

The Heating Fundamentals certificate provides students with the theory and hands-on training in the operation of heating and cooling system design and component application. The certificate program will focus on concepts of installation, service repair, preventative maintenance and start-up of heating and cooling systems.

**TOTAL CREDIT HOURS: 70.0** 

The students will be required to take the R-410A Certification and the Heat Pump Certification exams.

Heating Fundamentals certificate graduates will have opportunities to work in the industry in one or more of the following areas: service, installation and repair of gas, oil and electric heating systems, service, installation and repair of heat pump systems and design and installation of air duct systems.

## Day or Evening Program FIRST SEMESTER

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	ACR 110	Heating Fundamentals	4.0
	ACR 122	Principles of Air Conditionin	ng5.0
	ACR 210	Heat Pumps	4.0
SECOND SEMESTER			
	ACR 223	Testing and Balancing	3.0
	ACR 224	Codes and Ordinances	2.0
	ACR 231	Advanced Refrigeration	4.0
	CPT 101	Introduction to Computers.	3.0

## Refrigeration Applications Certificate

The Refrigeration Applications certificate provides students with the theory and hands-on training in the operation of refrigeration system design and component application. The certificate program will focus on installation, start-up, service repair and preventative maintenance of commercial and domestic refrigeration systems.

The students will be required to take the EPA 608 Refrigerant Handling Certification, Light Commercial Refrigeration Certification exam and the Electrical Certification exam.

Refrigeration applications graduates will have opportunities to work in the refrigeration industry in one or more of the following areas: service and repair of refrigeration systems, service and repair of domestic refrigeration systems, service and installation of food and vending refrigeration equipment and service and installation of supermarket equipment.

#### Day or Evening Program

FIRST S	EMESTER	CREDIT HOURS
ACR 101	Fundamentals of Refrigerati	on5.0
ACR 105	Tools and Service Techniqu	es I1.0
ACR 106	Basic Electricity for HVAC/	'R4.0
CPT 101	Introduction to Computers	3.0
SECONI	SEMESTER	
ACR 109	Tools and Service Techniqu	es II2.0
ACR 131	Commercial Refrigeration	4.0
ACR 140	Automatic Controls	3.0
SUMME	R TERM	
ACR 107	Wiring Diagrams	2.0
ACR 130	Domestic Refrigeration	4.0
	Basic Sheet Metal	
ACR 160	Service Customer Relations	3.0

**TOTAL CREDIT HOURS: 33.0** 

>>> Visit www.ptc.edu/hvac to learn more.

CDEDIT HOUDS