

CONSTRUCTION TECHNOLOGIES, AAS

Heating, Ventilation, Air Conditioning/ Refrigeration (HVAC/R)

The Associate of Applied Science, Heating, Ventilation, Air Conditioning and Refrigeration trains technicians to design and maintain complex heating, cooling and refrigeration systems in structures of all sizes and functions, from homes to casino resort hotels. The HVAC/R program combines classroom instruction with hands-on practice and provides industry upgrade training on an on-going basis.

Outcomes

Students completing the emphasis will:

- Demonstrate a comprehensive understanding of HVAC/R principles and applications and the skills to work safely and efficiently in the HVAC industry.
- Design residential and commercial HVAC/R systems.
- Gain knowledge and practical skills to troubleshoot and repair residential and commercial HVAC/R systems.

AAS degrees are generally non-transfer degrees that are designed for students to enter the workforce.

To earn an AAS degree, students must:

1. Maintain a minimum cumulative GPA of 2.0 (see requirements for graduation.)
2. Complete a minimum of 15 units within the college.
3. Satisfy General Education requirements for the AAS (<http://catalog.tmcc.edu/degrees-certificates/general-education/aas>).
4. Have no financial or library obligation to the college.

Code	Title	Units
General Education Requirements		
<i>Diversity</i> ¹ 3		
Recommended:		
AAD 201	History of the Built Environment	
<i>Communications/English</i> 6		
<i>Fine Arts/Humanities/Social Science</i> ¹ [3]		
<i>Human Relations</i> 3		
Recommended:		
CE 201	Workplace Readiness	
<i>Mathematics</i> 3		
Recommended:		
MATH 108	Math for Technicians	
<i>Science</i> 3		
<i>U.S. and Nevada Constitutions</i> 3		
Degree Requirements		
AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 111	Heat Pumps	3
AC 113	Schematic Reading for HVAC/R	3

AC 121	Sheet Metal I	3
AC 150	Basic Refrigeration Servicing	6
AC 106 or AC 200	Residential Gas Heating Commercial Refrigeration I	6
OSH 222	General Industry Safety	1
Electives		
Select 8 units from the following:		8
AC 204	Cooling Tower Systems- Operation and Maintenance	
AC 210	Boiler Operation and Maintenance	
AC 295	Internship HVAC Career (1-6 units)	
Any other AC courses not listed		

Total Units 60

¹ Select a course that satisfies both Diversity and Fine Arts/ Humanities/Social Science. Please consult with Academic Advisement.

1st semester		Units
AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 111	Heat Pumps	3
Mathematics ³		3
OSH 222	General Industry Safety	1
Semester Total		16

2nd semester		Units
AC 113	Schematic Reading for HVAC/R	3
AC 121	Sheet Metal I	3
Communications ²		3
ENRG 130	Introduction to Solar Energy	3
Science ²		3
Semester Total		15

3rd semester		Units
AC 150	Basic Refrigeration Servicing	6
Elective ³		3
English ²		3
U.S. and Nevada Constitutions ²		3
Semester Total		15

4th semester		Units
AC 106 or AC 200	Residential Gas Heating or Commercial Refrigeration I	6
Diversity/Social Science		3
Elective ³		2
Human Relations ³		3
Semester Total		14
Total Units		60

² See approved General Education list for the AAS Degree. (<http://catalog.tmcc.edu/degrees-certificates/general-education/aas>)

³ See program recommendations or requirements.