

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

Certificate of Achievement

The HVAC/R certificate of achievement prepares individuals for entry-level positions in the heating, ventilation, air conditioning and refrigeration industries. The training focuses on maintenance, troubleshooting and repair of modern equipment used in residential, commercial and industrial buildings throughout Northern Nevada. Emphasizing hands-on training, the program prepares students with the knowledge and skills required for industry-standard certifications and sought by employers.

Certificate Outcomes

Students completing the certificate 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 the knowledge and skills to troubleshoot and repair residential and commercial HVAC/R systems.

General Education Requirements

Communications	3 credits
Human Relations	3 credits
Recommended: CE 201	
Quantitative Reasoning	3 credits
(Human Relations and Quantitative Reasoning skills may be embedded in other required courses for a certificate rather than required as specific general education courses.)	
Total General Education Requirements	9 Credits

Emphasis Requirements

AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 150	Basic Refrigeration Servicing	6
AIT 110	General Industrial Safety	1
Total Emphasis Requirements		16 Credits

Elective Requirements

Choose six credits from the following:

AC 106	Residential Gas Heating	(6)
AC 111	Heat Pumps	(3)
AC 121	Sheet Metal I	(3)
AC 200	Commercial Refrigeration I	(6)
AC 210	Boiler Operation and Maintenance	(3)
Total Elective Requirements		6 Credits

Total Certificate Requirements	31 Credits
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Suggested Course Sequence

Course #	Title	Credits	
1st Semester			
Emphasis	AC 102	Refrigeration Theory	3
Emphasis	AC 107	Electrical & Controls for HVAC	6
Emphasis	AIT 110	General Industrial Safety	1
Quantitative Reasoning	MATH 108	Math for Technicians	3
Communications	ENG 107	Technical Communications I	3
Total		16	
2nd Semester			
Electives		Choose from list	6
Emphasis	AC 150	Basic Refrigeration Servicing	6
Human Relations	CE 201	Workplace Readiness	3
Total		15	
Certificate Total		31	

Recommended Program Prerequisites:

ENG 090 or 097 or qualifying Accuplacer score

MATH 093 or qualifying Accuplacer score