

CONSTRUCTION & MANUFACTURING

HVAC/R TECHNOLOGY

Delivery: Daytime Classes

Start: Fall Semester, Full-Time

AWARDS

HVAC & Refrigeration A.A.S. 60 cr.
 HVAC & Refrigeration Diploma. 39 cr.

MAJOR DESCRIPTION

Employment of HVAC/R technicians is expected to increase faster than average for all occupations through the year 2032. The goal of DCTC’s Heating, Ventilation, Air Conditioning and Refrigeration program is to provide students with the entry level knowledge and skills required to safely install, maintain, troubleshoot and repair today’s technologically advanced HVAC/R systems. Through group discussions, lectures and hands-on laboratory experience with actual HVAC/R equipment, this program helps students become successful in this exciting and challenging industry career. Interested applicants should possess strong basic math skills and mechanical aptitude. Each student will be prepared and required to pass the EPA Section 608 refrigerant handling certification exam.

WORK ENVIRONMENT

HVAC/R technicians must be able to work independently, in extreme conditions, at all hours of the day. From the cold of winter to the heat and humidity of summer, in attics, basements, crawl spaces and on roof tops. Occasional heavy lifting, working off ladders or scaffolding and being comfortable with heights are also potential requirements. HVAC/R technicians should expect to be on call and work after hours and some weekends.

POTENTIAL JOB TITLES

- Residential and/or Commercial HVAC/R Service Technician
- Residential and/or Commercial HVAC/R Installer
- Sheet Metal Fabrication and Installation
- HVAC/R Equipment and Parts Salesperson

SALARY DATA

See latest data at careerwise.minnstate.edu.

- Average Wage: \$39.78/hour
- Top Earners: \$45.73/hour

ADDITIONAL INFORMATION

Scan the QR code for more program information and specific program costs; this program has additional program costs.



HVAC & REFRIGERATION

A.A.S. DEGREE

All HVAC courses must be taken in the sequence below. Please contact your program advisor with questions.

First Year - Fall Semester 20 cr

HVAC1100	Alternative Heating and Cooling Methods	2
HVAC1110	Indoor Air Quality	1
HVAC1120	Refrigeration Principles and Applications	4
HVAC1130	Tool Usage, Brazing and Soldering Techniques.	2
HVAC1140	Electric Motors/Controls/Schematics.	2
HVAC1150	Halide Refrigerant Certification	2
HVAC1160	Employability, Problem Solving and Customer Relations	2
HVAC1170	Introduction to Basic Electricity	2
COMS1020	Interpersonal Communication.	3

First Year - Spring Semester 19 cr

HVAC1200	Forced Air Heating Systems	4
HVAC1210	Hydronic Heating Systems.	2
HVAC1231	Ventilating Systems	2
HVAC1232	Sizing and Installation	2
HVAC1240	Air Conditioning and Heat Pump Service	3
HVAC1250	Commercial Refrigeration.	3
	General Elective (MnTC Goal 3) <i>BIOL1110 program recommended</i>	3

Second Year - Fall Semester 12 cr

HVAC2220	Commercial HVAC	3
ENGL1150	Composition I or	
ENGL1200	Technical Writing.	3
IETA1500	Print Reading	3
IETA2000	Boiler Operations and Power Distributions.	3

Second Year - Spring Semester 9 cr

HVAC2900	Internship.	1
IETA1600	Welding Basics or	
IETA2700	Introduction to Plumbing	2
	General Elective (any MnTC Goal 1-10).	6

TOTAL PROGRAM REQUIREMENTS 60

HVAC & REFRIGERATION

DIPLOMA

All HVAC courses must be taken in the sequence below.
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First Year - Fall Semester **20 cr**

HVAC1100	Alternative Heating and Cooling Methods	2
HVAC1110	Indoor Air Quality	1
HVAC1120	Refrigeration Principles and Applications	4
HVAC1130	Tool Usage, Brazing and Soldering Techniques	2
HVAC1140	Electric Motors/Controls/Schematics.	2
HVAC1150	Halide Refrigerant Certification	2
HVAC1160	Employability, Problem Solving and Customer Relations	2
HVAC1170	Introduction to Basic Electricity	2
COMS1020	Interpersonal Communication.	3

First Year - Spring Semester **19 cr**

HVAC1200	Forced Air Heating Systems	4
HVAC1210	Hydronic Heating Systems.	2
HVAC1231	Ventilating Systems	2
HVAC1232	Sizing and Installation	2
HVAC1240	Air Conditioning and Heat Pump Service	3
HVAC1250	Commercial Refrigeration.	3
	General Elective (MnTC Goal 3 or 4) <i>BIOL1110 program recommended</i>	3

TOTAL PROGRAM REQUIREMENTS 39

HVAC2960 Specialized Lab - 1 credit technical elective is suggested, but not required.



DAKOTA COUNTY
TECHNICAL COLLEGE

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DCTC IS AN AFFIRMATIVE ACTION, EQUAL OPPORTUNITY EMPLOYER/EDUCATOR.

This information is available in an alternate format by calling 651-423-8469 or TTY/Minnesota Relay at 1-800-627-3529.