



ONE
FOCUS
YOUR
SUCCESS



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HVACR – HEATING,
VENTILATION,
AIR CONDITIONING AND
REFRIGERATION
IS A FAST-GROWING
CAREER FIELD

Hundreds of good-paying jobs are waiting for trained applicants

The U.S. Department of Labor predicts excellent job prospects for HVACR mechanics and installers over the next six years – particularly for those who have completed training at an accredited college. FRCC has the only nationally accredited HVACR program in Colorado or Wyoming. An Associate of Applied Science (A.A.S.) degree from Front Range Community College will help you get a great job with good pay.

INSTRUCTOR PROFILE Brad Guthrie



Brad, the program director, is North American Technician Excellence (NATE) certified. NATE is the only certification test supported by the entire HVACR industry. Brad, who has an A.A.S. degree in Commercial-Industrial Refrigeration, Heating and Air Conditioning, worked in HVACR for Xcel Energy for 20 years. His last 10 years with

Xcel were as the HVACR technical supervisor. He developed an HVACR training program for Xcel to train entry-level employees to become HVACR service technicians. "I enjoy being a part of helping others become the best they can," Brad says. "Teaching is something I really enjoy. It involves good planning, preparation, and delivery. My industry experience brings the real world of HVACR to the classroom."

HVACR Mechanic and Installer Salaries

	Median/Hourly	Median/Annual
Larimer County	\$18.85	\$39,214
Weld County	\$18.60	\$38,698
State	\$20.03	\$41,672

Colorado Department of Labor and Employment
Occupational Employment Statistics Survey (2008)

If you have an A.A.S. degree from Front Range Community College, you will have the training, from basic to advanced, in heating, air conditioning, and refrigeration that qualifies you for good pay in a growing field. You also will learn the teamwork and customer-service skills today's job market demands.



Want to get started faster? A year-long certificate gets you started in a specific area that interests you:

- Light Commercial Air Conditioning and Heating
- Residential Air Conditioning and Heating
- Commercial Refrigeration

A career in HVACR could be just right for you.

Do you like working with your hands? HVACR technicians work on mechanical, electrical, and electronic components such as motors, compressors, pumps, thermostats, and switches.

Do you like to fix things that are broken? HVACR technicians troubleshoot, diagnose, and correct problems in heating, air conditioning and refrigeration systems.

Do you like to work with tools and gauges? HVACR technicians use hammers, wrenches, drills, pipe cutters, and acetylene torches. They rely on voltmeters, thermometers, pressure gauges, and other testing devices.

Do you have an entrepreneurial streak? Start your own business.

HVACR — MOVING AHEAD WITH GOOD PAY

This is a quality program

Accreditation means quality, and FRCC's HVACR Program has earned national accreditation from PAHRA, the Partnership for Air-Conditioning, Heating, Refrigeration Accreditation. Accreditation ensures a level of quality by establishing and maintaining high educational standards. In short, FRCC's program meets national standards established by industry professionals. This accreditation is recognized by the Air Conditioning Contractors of America and the Plumbing-Heating-Cooling Contractors Association. Yes, your training will set you apart.

Learn from the best instructors in the business

They've been on the job. And now they want to teach. They have stories to tell that help make their subjects real and exciting. You can expect to learn a lot and have a great time doing it in small classes where you get lots of hands-on training and plenty of personal interaction.

STUDENT PROFILE

John Kading



John is on his third career. He was a manufacturing engineer in Iowa, but he realized he needed a degree, so it was on to Kennesaw State University in Georgia for a bachelor of science in information systems. Then he worked in high tech in Georgia and Colorado. Anticipating a transfer and relocation, John thought about another career. His father-in-

law was a retired refrigeration mechanic, and together they had replaced a couple of furnaces. So he entered FRCC's HVACR program. "I needed to fill in some gaps," he says. "This is a good place to ask questions. I gained insights from guys who have been in this for years." Now, John owns his own business.

STUDENT PROFILE

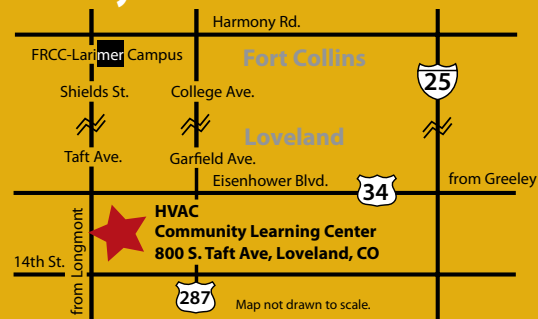
Michael Nelms



Michael was already working in the HVACR industry when he enrolled at FRCC. "I won't knock the field experience," he says, "but I wanted the best of both worlds. School accelerated my transition from apprenticeship." Today, Michael has his own HVACR business. He was the first person in Colorado with

Excellence (NATE) certification in gas hydronics. He's also a licensed mechanical contractor. With experience in electrical and plumbing skills as well, Michael volunteers and shares all his expertise on Habitat for Humanity projects.

The HVAC learning center is centrally located



INSTRUCTOR PROFILE

Patrick Geiger



Patrick has 22 years of experience in appliance repair and maintenance of commercial restaurant equipment. His business, North Star Appliance Repair, has residential and commercial customers. Patrick's experience in the industry and as a student in FRCC's HVACR program himself fueled his passion for teaching. "I just like teach-

ing," he says. "I like sharing what I have learned, and I like learning from the students. Teachers learn as much from the students as the students learn from the teacher and each other." Patrick teaches HVA 101 Introduction to Air Conditioning and Refrigeration, HVA 102 Basic Refrigeration, HVA 103 Basic Electricity, and HVA 104 Electrical Components for Air Conditioning and Refrigeration.

Course requirements for Associate of Applied Science in HVACR

REQUIRED COURSES	CREDITS
CAD 100 Blueprint Reading	3
HVA 101 Introduction to Air Conditioning and Refrigeration	4
HVA 102 Basic Refrigeration	4
HVA 103 Basic Electricity	3
HVA 104 Electrical Components for Air Conditioning and Refrigeration	4
HVA 122 Commercial Refrigeration	4
HVA 123 Air Conditioning	4
HVA 124 Advanced Air Conditioning	4
HVA 201 Heating for Commercial Applications	3
HVA 202 Troubleshooting and Customer Service	3
HVA 203 Industrial Controls	3
HVA 247 Hot Water Heating Systems	4
HVA 280 Internship	1
MTE 110 Manufacturing Communication and Teamwork or SPE 125 Interpersonal Communications	3
Total Required Credits	47

REQUIRED GENERAL EDUCATION COURSES	CREDITS
ENG 131 Technical Writing I	3
MAT 107 Career Mathematics	3
PHY 105 Conceptual Physics	4
General Studies Elective*	3
Social and Behavioral Sciences or Arts and Humanities Elective*	3
Total Required General Education Credits	16
Total Required Credits for A.A.S. Degree	63

* Electives must be selected from the Approved General Education Electives List for the A.A.S. Degree.

INSTRUCTOR PROFILE

Dale Hoerner



Dale worked in construction as he earned a bachelor's degree in agronomy from Colorado State University. After a layoff from the company where he was an agricultural researcher, he sought another career and earned an associate degree in HVACR. He's been working in the industry since 1985. Now with Albracht's One Hour Heating

and Air Conditioning, he installs and retrofits systems and performs some service work and some management. It's all good background for teaching HVA 123 Air Conditioning, HVA 124 Advanced Air Conditioning, and HVA 202 Troubleshooting and Customer Service. "I like to interact with students," he says. "I like to help students understand the science behind the work. Understanding the background makes them better technicians."

Course requirements for certificates in HVACR

Light Commercial Air Conditioning and Heating

REQUIRED COURSES	CREDITS
HVA 101 Introduction to Air Conditioning and Refrigeration	4
HVA 102 Basic Refrigeration	4
HVA 103 Basic Electricity	3
HVA 104 Electrical Components for Air Conditioning and Refrigeration	4
HVA 124 Advanced Air Conditioning	4
HVA 201 Heating for Commercial Applications	3
HVA 202 Troubleshooting and Customer Service	3
HVA 203 Industrial Controls	3
MTE 110 Manufacturing Communication and Teamwork or SPE 125 Interpersonal Communications	3
Total Required Credits for Certificate	31

Residential Air Conditioning and Heating

REQUIRED COURSES	CREDITS
HVA 101 Introduction to Air Conditioning and Refrigeration	4
HVA 102 Basic Refrigeration	4
HVA 103 Basic Electricity	3
HVA 104 Electrical Components for Air Conditioning and Refrigeration	4
HVA 123 Air Conditioning	4
HVA 124 Advanced Air Conditioning	4
MTE 110 Manufacturing Communication and Teamwork or SPE 125 Interpersonal Communications	3
Total Required Credits for Certificate	26

Commercial Refrigeration

REQUIRED COURSES	CREDITS
HVA 101 Introduction to Air Conditioning and Refrigeration	4
HVA 102 Basic Refrigeration	4
HVA 103 Basic Electricity	3
HVA 104 Electrical Components for Air Conditioning and Refrigeration	4
HVA 122 Commercial Refrigeration	4
HVA 202 Troubleshooting and Customer Service	3
MTE 110 Manufacturing Communication and Teamwork or SPE 125 Interpersonal Communications	3
Total Required Credits for Certificate	25

GET STARTED!

Contact Brad Guthrie

brad.guthrie@frontrange.edu, or 970-613-7588

FRCC-Community Learning Center

800 S. Taft Ave. · Loveland, CO 80537

Go to www.frontrange.edu/HVACR