Larimer Campus

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ONE FOCUS > YOUR SUCCESS

FRONT RANGE COMMUNITY COLLEGE

START A GREAT CAREER IN HVAC/R

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FRONT RANGE COMMUNITY COLLEGE

HVAC/R – 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 HVAC/R 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 HVAC/R 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 HVAC/R industry. Brad, who has an A.A.S. degree in Commercial-Industrial Refrigeration, Heating and Air Conditioning, worked in HVAC/R for Xcel Energy for 20 years. His last 10 years with Xcel were as the HVAC/R technical supervisor. He developed an HVAC/R training program for Xcel to train entry-level employees to become HVAC/R 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 HVAC/R to the classroom."

HVAC/R Mechanic and Installer Salaries

	Average Annual Wage
Larimer County	$47,386
Weld County	$43,098
State	$48,770

Colorado Department of Labor and Employment
Occupational Employment Statistics Survey (2011)

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 HVAC/R could be just right for you.

Do you like working with your hands?
HVAC/R 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?
HVAC/R technicians troubleshoot, diagnose, and correct problems in heating, air conditioning and refrigeration systems.

Do you like to work with tools and gauges?
HVAC/R 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.

Rev 8/2012

HVAC/R – MOVING AHEAD WITH GOOD PAY

This is a quality program

Accreditation means quality, and FRCC's HVAC/R 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.

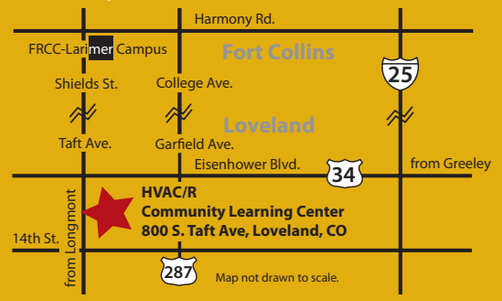
INSTRUCTOR PROFILE
John Kading

Teaching is John's fourth career. He was a manufacturing engineer in Iowa when he realized he needed a college degree, so he went to Kennesaw State University in Georgia for a bachelor's in information systems. He worked in high tech in Georgia and Colorado. Anticipating a transfer and relocation, John thought about another career. He entered FRCC's HVAC/R program. "I gained insights from guys who have been in this industry for years," he says. With new-found skills, he opened his own HVAC/R business. And now, in addition to his business, the former student teaches HVA 101 Introduction to Air Conditioning and Refrigeration and HVA 102 Basic Refrigeration. "I really like HVAC/R," he says. "I love to talk about it, and I love to pass on my knowledge to the students."

INSTRUCTOR PROFILE
Dale Hoerner

Dale worked construction while he earned a bachelor's degree in agronomy from Colorado State University. He became an agricultural researcher. After a layoff, he earned an associate degree in HVAC/R. He's been working in the industry since 1985, doing residential/light commercial HVAC installation, retrofitting replacement systems, and service, Dale is now building and grounds coordinator for First Presbyterian Church in Fort Collins. His job includes the care and maintenance of the HVAC physical and direct digital control systems. 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."

The HVAC/R learning center is centrally located



STUDENT PROFILE
Michael Nelms

Michael was already working in the HVAC/R 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 HVAC/R business. He was the first person in Colorado with North American Technician 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.

Course requirements
for Associate of Applied Science in HVAC/R

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 200 International Residential Code	2
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	**49**

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	**65**

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

STUDENT PROFILE
Tony Dyer

Tony had a career as a telecommunications technician but wanted to go in a different direction. "I looked for a program that wherever I lived, under any circumstances there would be a career," he says. His research pointed to Heating, Ventilation, and Air Conditioning. He enrolled in FRCC's program, and it wasn't long before he had a job as an HVAC technician with Service Experts, a company owned by Lennox, an HVAC industry giant. "I've been moving forward with my education with a full-time job," he says. Tony will take the last class for an Associate of Applied Science in HVAC in fall 2012. Tony also is moving forward with his career. He is a residential service consultant with Service Experts now. "I love the work," he says. "I learned a lot as a technician and through FRCC. Additional training in Dallas with Lennox has given me more exposure to the industry and allowed me to be better-rounded as a consultant."

Course requirements for certificates in HVAC/R

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 123 Air Conditioning	4
HVA 124 Advanced Air Conditioning	4
HVA 200 International Residential Code	2
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 COM 125 Interpersonal Communication	3
Total Required Credits for Certificate	**37**

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
HVA 200 International Residential Code	2
HVA 202 Troubleshooting and Customer Service	3
HVA 247 Hot Water Heating Systems	4
MTE 110 Manufacturing Communication and Teamwork or COM 125 Interpersonal Communication	3
Total Required Credits for Certificate	**35**

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
HVA 203 Industrial Controls	3
MTE 110 Manufacturing Communication and Teamwork or COM 125 Interpersonal Communication	3
Total Required Credits for Certificate	**28**

GET STARTED!

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