



## FERRIS STATE UNIVERSITY

COLLEGE OF ENGINEERING  
TECHNOLOGY



The basic principles of thermodynamics, fluid mechanics, and heat transfer are the foundation for the study of Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR). The application of these principles provides the technology used to heat homes, cool offices, and preserve food. From a larger perspective, society could not exist without HVACR systems. Students at Ferris State University develop an understanding of these principles and when they graduate they serve the needs of society. Their education enables them to provide human comfort, food preservation, and manufacturing processes.

Based on information from the Energy Information Administration, approximately 1/3 of the energy in the United States is consumed by HVACR equipment, a primary focus of the HVACR programs at Ferris State University is energy management. Students learn to optimize system performance through proper design, maintenance, operation, and control. They understand the potential their work has on reducing the impact on the environment

In applying the philosophy of Ferris State University, the HVACR Technology degree provides a balance of theory and application. This includes a solid foundation grounded in the principles of HVACR combined with extensive laboratory experience.

The program is conducted in the 72,000 square foot Granger Center that contains laboratories equipped with over 150 HVACR systems that provide a real-world learning environment. While in the laboratories students learn to test, systematically troubleshoot, and repair and maintain electrical and mechanical HVACR systems and components. Students engage in learning opportunities involving residential, commercial, and industrial HVAC systems along with commercial refrigeration equipment.



## PROGRAM STRENGTHS

- Originally established in 1945, the curriculum in the Associate in Applied Science degree program has evolved to keep pace with changing technology
- A strong industry advisory board, consisting of leaders from all sectors of the industry, provides information about current technology and industry practices
- The Granger Center provides individual laboratories dedicated to:
  - Gas fuel equipment
  - Fuel oil equipment
  - Basic air conditioning and refrigeration
  - Advanced air conditioning
  - Commercial refrigeration
  - Electricity, controls and fabrication
- Equipment from all of the major manufacturers is used in the laboratories
- Students gain from the experience of qualified professionals, each with numerous years of industry experience

## PROGRAM OFFERINGS

### ASSOCIATE IN APPLIED SCIENCE IN HVACR TECHNOLOGY

The Associate in Applied Science degree (AAS) program prepares students to enter the workforce as an HVACR technician. Typically AAS graduates continue into the Bachelor of Science degree program in HVACR Engineering Technology.

Under the guidance of industry-experienced professors, students develop knowledge and understanding of:

- Fabrication and joining techniques
- Basic refrigeration
- Heating
- Air Conditioning
- Commercial refrigeration
- Electrical fundamentals
- HVACR controls
- Design of HVACR systems

## OPTIONS FOR GRADUATES

Upon completion of the Associate in Applied Science degree in HVACR Technology, graduates enter the field as installers, service technicians, designers, manufacturers, sales representatives, and laboratory technicians.

The United States Department of Labor reports that HVACR jobs are projected to grow faster than average, and job prospects are expected to be excellent.

The Associate in Applied Science degree will transfer into at least twenty other Ferris State University Bachelor of Science degree programs including business administration, computer information systems, television production, and career and technical education.

Graduates may also continue with their education and earn a Bachelor of Science degree in HVACR Engineering Technology.

## STUDENT ORGANIZATIONS

Exceptional networking opportunities exist through the student chapters of:

- The Air Conditioning Contractors of America (ACCA)
- The Mechanical Service Contractors of America (MSCA)
- The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

## RECOGNITION

- Ferris State University is recognized as the leader in HVACR education and is routinely cited in industry magazines and publications
- Faculty members serve on several national committees and boards
- Employers from throughout the United States recruit Ferris State University HVACR students

## ENROLLMENT

To apply online visit the web site:

[www.ferris.edu/admissions/application](http://www.ferris.edu/admissions/application)

## CONTACT INFORMATION

Ferris State University  
College of Engineering Technology  
Heating, Ventilating, Air Conditioning, and Refrigeration Department  
605 South Warren  
Granger Center Room 227  
Big Rapids, MI 49307  
Phone: 231-591-3773  
Email: [hvacr@ferris.edu](mailto:hvacr@ferris.edu)  
Web site: [www.ferris.edu/HVACR](http://www.ferris.edu/HVACR)