

# HEATING, VENTILATION AND AIR CONDITIONING

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## LIMITED ENROLLMENT

Delivery method: On campus

Program begins: Fall and Spring

## Program Description

The Heating, Ventilation and Air Conditioning (HVAC) program equips students in the newest technology for this rapidly expanding field. In this program, students will work in the modern, well-equipped lab, and master installation and repair procedures, learn the use and care of basic tools and equipment and how to operate by EPA and safety standards set by OSHA regulations. Instruction includes HVAC components, systems, troubleshooting, domestic and light commercial refrigeration<sup>1</sup>, and sheet metal<sup>2</sup>.

HVAC is a limited enrollment, 10½-month program that prepares graduates for entry-level jobs.

Students enroll either fall or spring semester.

1. Students will take the Environmental Protection Agency's refrigerant use exam, required for anyone working with refrigerants.
2. Sheet metal is an integral part of the air conditioning and heating industry. Bismarck State College is a nationally registered training center for sheet metal and HVAC through the National Center for Construction Education and Research (NCCER). Students are placed on a national registry after successfully completing individual module exams and related tasks.

## Preparation

Background in these areas is recommended: basic algebra and geometry, physical science, computer technology, basic knowledge of drafting, and working knowledge of a scientific calculator. Some knowledge of plumbing or electricity is helpful. Students should be physically fit and able to lift and move heavy equipment.

## Program Requirements

Students who complete the curriculum requirements earn a Program Certificate in HVAC. Additional coursework may lead to a Diploma or Associate in Applied Science degree.

## Special Costs

A \$100 deposit, required upon acceptance into the program, is applied toward tuition. Fee is non-refundable if you decide not to attend BSC.

Students must have the specified tool kit and drafting kit the first week of class.

## Career Opportunities

According to the U.S. Bureau of Labor Statistics, over the next 6 to 10 years the Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) field is expected to be one of the fastest growing fields in the United States. Graduates can expect to find positions in service, installation, sales, building maintenance, controls and testing and balancing. Positions also are available in marketing, controls, bidding and estimating. After gaining experience in the field, some graduates can move into positions as foremen, supervisors, or teachers. Others will open their own contracting business.

## Additional Information

### Industry Technical Standards

Awareness of these HVAC industry standards may help students determine suitability for this career:

- Must have the ability to perform close accurate work, communicate effectively with others, present information in a clear concise manner, and follow verbal and written instructions.
- Requires good finger dexterity, good vision and hearing.
- Requires continuous walking, frequent standing, bending, stooping, climbing ladders and stairs, kneeling, lifting and carrying up to 50 pounds, and carrying long or oversized loads.
- Frequently requires working over your head.
- Requires continuous use of hand tools and frequent use of power tools.
- Frequently exposed to noise, dirt, dust, fumes, chemicals, extreme heat and cold, vibration, and confined areas.

## Contact

701-224-2429

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## **Degree Plans**

- Heating, Ventilation and Air Conditioning Associate in Applied Science
- Heating, Ventilation and Air Conditioning Diploma
- Heating, Ventilation and Air Conditioning Program Certificate