Heating, Ventilation, Air Conditioning, Refrigeration (HVACR) AS

**PROGRAM LEARNING OUTCOMES**

1. Analyze the electrical parts of the refrigeration system.
2. Differentiate between many types of motor.
3. Distinguish between mechanical and electrical controls.
4. Demonstrate basic control design that have applications to the HVACR industry.
5. Identify the different types of controllers for the HVACR industry.
6. Use oral and written communication skills in the HVACR industry.

**Complete 60 degree applicable units along with completion of all required general education requirements. It is highly recommended that you see a counselor for specific courses that will best meet your educational plan/goals. Not all courses on the map are offered every term. Consult the Catalog and the Schedule of Classes for more details.**

For information about transferring, see: https://www.dvc.edu/enrollment/transfer/index.html

For information on careers in this field see: https://www.dvc.edu/enrollment/career-employment/index.html

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This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for this section.

**Entry**

HVACR 110 Electrical Theory I

HVACR 111 Mechanical Refrigeration Theory

HVACR 115 Intermediate Mechanical Refrigeration I

HVACR 116 Intermediate Electrical II

HVACR 117 Intermediate Mechanical Refrigeration II

HVACR 118 Electrical Troubleshooting I

HVACR 119 Electrical Troubleshooting II

HVACR 120 Introduction to Direct Digital Controls

HVACR 121 Introduction to Variable Frequency Drives

HVACR 122 Introduction to Market Refrigeration Systems

HVACR 123 Introduction to Pneumatic Controls

HVACR 124 Introduction to Boilers

HVACR 125 Advanced Compressor and Motor Theory

HVACR 126 Start Test Balance: Water Side I

HVACR 127 Start Test Balance: Air Side I

HVACR 128 Start Test Balance: Water Side II

HVACR 129 Start Test Balance: Air Side II

**Exit**

Careers in

- Residential, commercial, or industrial HVAC

- **Required**

- **Elective**