

# HVA 132 - COMMERCIAL A/C & REFRIGERATION

---

- Assess the value of newer technology for use in industrial applications.

## Course Description

This course focuses on larger commercial systems encountered in the HVAC field for air conditioning and refrigeration applications. Emphasis is placed on chilled water and hydronic heating systems, boilers, air handling equipment and cooling towers. Students will also learn about larger scale refrigeration systems used in supermarket and cold storage applications, ice machine operation and discussion of control systems used throughout the field. Group 2 course.

## Credit Hours

3

## Contact Hours

4

## Lecture Hours

2

## Lab Hours

2

## Required Prerequisites

HVA 126 with a grade of 2.5 or higher

## Recommended Prerequisites or Skills Competencies

Placement into MTH 111 and ENG 111.

## Course Learning Outcomes

### Knowledge:

- Identify hazards and safety concerns associated with working on industrial sized equipment.
- Explain why chilled water is the preferred method of cooling for larger applications.
- Describe the purpose of a cooling tower system.

### Application:

- Differentiate between the various commercial refrigeration systems used in supermarket applications.
- Diagnose a faulty system.
- Differentiate between the types of defrost.
- Calculate the design temperature for a chilled and condenser water circuit.

### Integration:

- Compare basic skills learned in this course to the work requirements in the industry.
- Integrate schematic reading skills on an actual operating system.

### Human Dimension:

- Identify the need to observe industrial safety measures.

### Caring - Civic Learning:

- Defend the use of cooling towers in industrial applications.

### Learning How to Learn: