

# AT 170 - HEATING AND AIR CONDITIONING

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## Course Description

This course covers the principles of refrigeration with emphasis on the particular problems of application to automotive air conditioning. The course also covers automotive heating systems which include heater cores, blower motors, vent systems and the electronic controls for them. The student will learn how to use refrigerant recovery and charging equipment and will have hands-on experience in the lab with that equipment. Group 2 course.

## Credit Hours

4

## Contact Hours

6

## Lecture Hours

2

## Lab Hours

4

## Required Prerequisites

AT 120

## General Education Outcomes supported by this course

Critical Thinking - Direct

## Course Learning Outcomes

### Knowledge:

- Describe operation and service of current automotive air conditioning and heating systems using automotive system nomenclature.
- Use the results of diagnostic strategies to service/tear down/repair automotive heating and refrigeration systems.

### Integration:

- Apply problem solving strategies to resolve issues with automotive heating and refrigeration operation systems.

### Human Dimension:

- Discuss course information with others regarding engine performance.

### Caring - Civic Learning:

- Service a vehicle owned by a customer using recommended shop procedures.

### Knowledge:

- Demonstrate mastery of appropriate written test material for Automotive Air Conditioning Certification.