

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: AUT 235

Credits: 2

Course Title: Automotive Heating and Air Conditioning

Course Description: Studies separate and combined automotive heaters and air conditioning, including direct and vacuum-operated controls, basic principles of refrigeration, adjustment, general servicing, and charging of air-conditioning systems. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

General Course Purpose: This course introduces anyone studying automotive service technology, hobbyists, and service technicians to the operation of safe and proper procedures of maintaining, diagnosing, and servicing automotive heating and air-conditioning systems and their controls.

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Recognize proper and safe maintenance of cooling and air-conditioning systems;
- b. Diagnose and service automotive heating systems and components;
- c. Diagnose automotive air-conditioning systems and components; and
- d. Comprehend the safe and proper use of refrigerants used in AC systems.

Major Topics to Be Included:

- a. Safe and proper use and disposal of chemicals used in automotive systems
- b. Safe and proper recovery and recharging of refrigerant systems
- c. Safe and proper service of automotive cooling systems
- d. Safe and proper service of automotive air-conditioning systems

Date Created/Updated (Month, Day, and Year): October 9, 2018