

**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. Understand 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. Understand 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

**Effective Date of Course Content Summary:** January 30, 2018