

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

**Course Prefix and Number:** AUT 199

**Credits:** 2

**Course Title:** Supervised Study - Auto Diagnosis and Tune-Up

**Course Description:** Presents the techniques for diagnosis of malfunctions in systems of the automobile. Uses dynamometers, oscilloscopes, and other specialized diagnostic and testing equipment. Demonstrates tune-up of conventional and rotary engines. Prerequisite: AUT 126. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

**General Course Purpose:** To examine and perform diagnostic, repair, and tune-up techniques of common ignition, fuel, and engine control systems found on cars and light-duty trucks. Safety will be emphasized. This course consists of the same content as AUT 165 – Auto Diagnosis and Tune-Up.

**Course Prerequisites and Co-requisites:**

**Prerequisite:** AUT 126

**Student Learning Outcomes:**

Upon completing the course, the student will be able to

- a. Demonstrate a thorough knowledge of diagnostic tools and equipment used for troubleshooting and tune-up;
- b. Express a thorough understanding of electronic ignition system function and operation;
- c. Demonstrate the diagnosis and repair electronic ignition system problems;
- d. Demonstrate comprehensive skill in tune-up techniques; and
- e. Demonstrate the ability to use computerized engine analyzers.

**Major Topics to Be Included:**

- a. Basic electronics theory
- b. Electronic ignition systems
- c. Computer controls
- d. Tune-up procedures
- e. Use of analytical equipment

**Date Created/Updated (Month, Day, and Year):** August 17, 2018