

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

Course Prefix and Number: AUT 165

Credits: 2

Course Title: Auto Diagnosis and Tune-Up

Course Description (including lecture hours, lab hours, total contacts)

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. 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.

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

None

Course Objectives (Each item should complete the following sentence.)

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
- 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

Effective Date of Course Content Summary (Month, Date Year): February 9, 2009