

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: 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 and Co-requisites:

None

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 of 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): June 3, 2019