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

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