

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: AUT 266

Credits: 3

Course Title: Automotive Alignment, Suspension, and Steering

Course Description: Introduces use of alignment equipment in diagnosing, adjusting, and repairing front and rear suspensions. Deals with repair and servicing of power and standard steering systems. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

General Course Purpose: This course is a requirement of the Automotive Technology AAS and Certificate programs. Competent automotive technicians must have a thorough knowledge of assemblies, sub-assemblies, and components of automotive suspension and alignment systems. They must also be able to identify possible suspension and alignment system defects along with their cause and effect upon automobile operation.

Course Objectives:

Upon completing the course, the student will be able to

- a. Explain the purpose and operation of automotive suspension and alignment systems;
- b. Demonstrate diagnostic methods, tools, and equipment used in suspension and alignment systems tests;
- c. Determine the extent of repairs and adjustments and parts necessary for correction;
- d. Determine the cause of abnormal vehicle handling such as pulling, wandering, hard steering, or poor return and recommend needed repairs;
- e. Measure camber, caster, SAI, toe-out on turn, and toe on the front wheels;
- f. Adjust front and rear alignment angles that are adjustable on a given vehicle; and
- g. Perform ASE tasks relating to wheel alignment diagnosis, adjustment, and repair at the instructor's request.

Major Topics to Be Included:

- a. Suspension and steering system diagnosis, inspection, and component service
- b. Tire and wheel service
- c. Automotive alignment
- d. Road testing and troubleshooting
- e. Electronic controlled suspension systems

Effective Date of Course Content Summary: September 1, 2011