

COURSE OUTLINE

Revised By: B. Hughes July, 2007

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| DEPARTMENT: | Automotive Technology |
| CURRICULUM: | General Service Technician Program |
| COURSE TITLE: | Steering & Suspension |
| COURSE NUMBER: | AUT 122 |
| TYPE OF COURSE: | Vocational Preparatory |
| COURSE LENGTH: | Normally 3 weeks |
| CREDIT HOURS: | 4 |
| LECTURE HOURS: | 15 hours |
| LAB HOURS: | 60 hours |
| CLASS SIZE: | 20 maximum |
| PREREQUISITES: | MVM 100 (Introduction to Automotive Technology I), MVM 102 (Introduction to Automotive Technology II), AUT 100 (Introduction to Electricity), basic math skills, and 9 th grade or higher reading level (as evidence by appropriate placement test scores), and/or instructor permission. |

COURSE DESCRIPTION:

Contents include: steering and suspension theory, diagnosing steering and suspension problems, chassis design, wheel bearings, steering and suspension components, as well as removal, repair and installation of steering and suspension components from vehicles. In addition the function and construction of each component, and their diagnosis and service procedures will be covered. Instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking – Use problem solving skills to diagnose and repair steering and suspension problems. (SLO 4.1)
2. Technology - Proper use and care of automotive steering and suspension repair tools and equipment. (SLO 5.1)

PROGRAM OUTCOMES:

1. Inspect, diagnose, disassemble, repair, replace and service each of the major systems in various types of vehicles. (SLO 4.1)
2. Locate sources, make parts write-ups, calculate costs and explain repair or service. (SLO 2.1, 2.2 & 7.1)
3. Handle customer needs, complaints, questions and special challenges. (SLO 3.1 & 3.2)
4. Access and apply manufacturer's specifications in repair and replacement. (SLO 7.1)
5. Work safely and responsibly within all shop safety and environmental guidelines and standards. (SLO 6.4 & 6.5)
6. Demonstrate ability to pass the ASE test required for NATEF certification. (SLO 1.1, 1.2 & 7.1)
7. Communicate and document service records. (SLO 2.1)
8. Compute costs, time and measurements. (SLO 2.1, 2.2 & 7.1)
9. Work independently and in groups to service, repair, test and maintain vehicles. (SLO 3.1 & 6.3)
10. Use technology to test vehicles. (SLO 5.1)
11. Work with accuracy, dependability, proficiency and in a timely manner, when servicing equipment. (SLO 6.3 & 6.4)

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Explain and demonstrate safety as it applies to the automotive industry.
2. Explain the function and importance of suspension and steering systems.
3. Explain, identify, and service different kinds of suspension and steering systems found on automobiles and light trucks.
4. Describe the function and service of various kinds of manual and power steering components.
5. Demonstrate proficiency in NATEF competencies.

TOPICAL OUTLINE:

APPROX. HOURS

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| I. Chassis construction, fasteners, and safety | 5 |
| II. Wheel bearings diagnosis and service | 10 |
| III. Steering system operation, diagnosis and service | 30 |
| IV. Suspension system operation, diagnosis and service | <u>30</u> |
| Total | 75 |