

COURSE OUTLINE

Developed By: B. Hughes July, 07

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

COURSE DESCRIPTION:

Contents include: vehicle inspection; lube, oil and filter; cooling system, belt and hose; heating and air conditioning system; driveshaft; manual and automatic transmission problems, as well as servicing vehicles by performing: vehicle inspection; lube, oil and filter; cooling system, belt and hose; heating and air conditioning system; driveshaft; manual and automatic transmission service. In addition, the function and construction of each component, as well as 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 of study.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking – Use problem solving skills to diagnose and repair tires, wheels and alignment problems. (SLO 4.1)
2. Technology - Proper use of tire, wheel and alignment tools and equipment used in the automotive trade. (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. Demonstrate how to properly do vehicle inspections.
3. Demonstrate how to properly do a lube, oil and filters service.
4. Demonstrate how to repair cooling systems as well as service belts and hoses.
5. Demonstrate how to service heating and air conditioning systems.
6. Demonstrate how to service driveshafts.
7. Demonstrate how to service manual and automatic transmissions.
8. Demonstrate proficiency in NATEF competencies.

TOPICAL OUTLINE:

	APPROX. HOURS
I. Automotive safety.	5
II. Vehicle inspections.	10
III. Lube, oil and filter service.	10
IV. Belts, hoses and cooling system service.	10
V. Heating and air conditioning service.	10
VI. Clutch service.	5
VII. Driveshaft service.	10
VIII. Manual transmission service.	5
IX. Automatic transmission service.	<u>10</u>
Total	75